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ABSTRACT

This collection of 26 presentations on library cooperation from the 1979 meeting of the International Association of Technological University Libraries (IATUL) includes the following: "Is Cooperation a Good Thing?" by M. B. Line; "The Organisation of Co-Operation" by M. R. van Gils; "Co-Operation in Library and Information Service: The Role of Intergovernmental Organisations" by Elin Tornudd; "Cooperative Collection Development" by J. E. Skipper; "DOBIS at the Bibliocentre" by Doreen E. Carpenter; "New Aspects and Trends in Interlending in the Federal Republic of Germany" by J. Heydrich; "The Swedish LIBRIS System" by L. Gardvall; "The PICA Catalogue System" by L. Costers; "Cooperation in Library User Education" by Nancy Fjallbrant; "Teaching Library Co-Operation to Library Students" by B. Rugaas; "The Experimental Scientist and His Literature Searches" by D. A. A. Mossel; "Presentation of Twente Technological University Library" by G. A. Hamel; "Cooperation as a Solution to the Problems of European Community Documentation" by Mike Hopkins; and "Interaction of Online Users" by C. van de Weteringh. An abstract is provided for each paper as well as a summary of discussion following its presentation. (FM)

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IATUL

**Proceedings of the
Eighth Meeting of IATUL
Enschede**

May 28 - June 1, 1979

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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**Library
cooperation:
trends,
possibilities
and conditions**

edited by Nancy Fjällbrant

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FOREWORD

"In necessary things, unity;
in doubtful things, liberty;
in all things, charity"

Richard Baxter 1615-1691.

The theme of the Eighth IATUL Conference, held at Enschede, the Netherlands on May 28th to June 1st 1979 was Library Cooperation. The parameters for library cooperation were critically examined in a paper by M.B. Line: who pointed out that "librarians must first determine what they want to achieve, then specify alternative methods of achieving it, and then compare their likely costs and effectiveness." The organisation of cooperation was presented by M.R. van Gils who suggested the design of networks for dealing effectively with problems of interorganizational coordination. Three models were presented: the expert model, the organizational model and the action model. Elin Törnudd described the important role of intergovernmental organisations in fostering international cooperation in library and information services.

Examples of cooperative library and information systems were given; such as cooperative collection development by J.E. Skipper, and the use of DOBIS at the Bibliocentre, Scarborough, Ontario, by Doreen E. Carpenter. The Swedish LIBRIS system was described by L. Gärdvall and the Dutch PICA catalogue system by L. Costers. New aspects and trends in interlending in the Federal Republic of Germany were presented by J. Heydrich. Nancy Fjällbrant discussed the possibilities for cooperation in library user education. There were further examples of library and information service cooperation in different parts of the world, from: Hungary, India, the Netherlands, New Zealand, Sweden, the United Kingdom and Yugoslavia. B. Rugaas took up the problems of teaching library cooperation to library students, and D.A.A. Mossel gave an example of cooperation between the library staff and the user. The conference was rounded off by M.W. Hill who pointed out the need to identify the factors necessary for successful cooperation. These were discussed under four subheadings: strategic aspects, methodologies for cooperation, organisational problems and human factors. The balance of the various factors must be in favour, otherwise it is wiser to seek a solution other than by a cooperative project.

Nancy Fjällbrant

8th IATUL CONFERENCE

28th May - 1st June 1979, Enschede, The Netherlands

LIBRARY CO-OPERATION: TRENDS, POSSIBILITIES AND CONDITIONS

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What is IATUL?

IATUL - the International Association of Technological University Libraries - is a voluntary international organisation consisting essentially of a group of libraries, represented by their library directors and senior librarians with closely similar interests and responsibilities. It is small enough for the individual members to be able to develop a close relationship, yet widespread enough to cover the interests of libraries operating in virtually all modern social, economic and political situations. Furthermore, the majority of the members provide library services not only to the research, tutorial and student members of a university but also to the industrial organisations in their vicinity. The essential objective is to provide a forum where library directors can meet to exchange views on matters of current significance and provide an opportunity for them to develop a collaborative approach to problems.

Membership

Membership of IATUL is available to Libraries of Universities of Technology which grant doctoral degrees.

Official Observer Membership is available, upon invitation of the Board, to libraries whose technological collections are of research standard.

Non-voting associate membership of IATUL: is available to Libraries of institutions of higher education which offer courses in engineering or technology to at least an M.Sc. or equivalent standard or, in any country where no course to such a level is available, courses to a B.Sc. level.

Further information on IATUL can be obtained from the secretary:

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IATUL

INTERNATIONAL ASSOCIATION OF TECHNOLOGICAL UNIVERSITY LIBRARIES
ASSOCIATION INTERNATIONALE DES BIBLIOTHÈQUES D'UNIVERSITÉS POLYTECHNIQUES
INTERNATIONALE VEREINIGUNG DER BIBLIOTHEKEN TECHNISCHER UNIVERSITÄTEN
ASOCIACIÓN INTERNACIONAL DE BIBLIOTECAS DE LAS UNIVERSIDADES TECNOLÓGICAS
МЕЖДУНАРОДНОЕ ОБЪЕДИНЕНИЕ БИБЛИОТЕК ВУЗОВ ТЕХНИЧЕСКИХ ШКОЛ

ADDRESS OF WELCOME

A. Hooites Meursing

President of the Executive Committee
Twente University of Technology, Enschede, the Netherlands

Mr President, Members of the Board, Members of the IATUL,
Ladies and Gentlemen.

On behalf of the University's Board of Governors, the Executive Committee and the University Council, I welcome you all here today. It is with great pleasure that I do this and deem it a privilege and an honour, that this opportunity has been given to me so that I may address a few words to you all.

I personally, have a special relationship with the Library of this Institut, filling a seat, albeit as an observer and not as a full member, on the local library's standing advisory board. Mr. Hamel told me about the difficulties IATUL had in finding a meeting point agreeable to all members of your association and, after he had poured out all his troubles, I realised that this unfortunate course of events would give our university an excellent opportunity to demonstrate our own sense of co-operation.

Co-operation, I'm given to understand, is precisely the general theme and subject of your deliberations during the conference covering the next four days.

Perhaps you could have chosen a somewhat less ambitious subject, thereby making life a lot easier for yourselves, but no, you deliberately chose to take the more difficult path. Librarians, as a rule, are hard on themselves, but even so, those whom I know appear to be rather optimistic creatures who, if you will forgive me for saying so, are inclined to view life through rose coloured glasses, but at the same time judge the world and themselves by very high standards. They are not easily satisfied and always demanding but, once again, at the same time constantly dreaming of a world in which they are actively taking part in the building process, a world where peace and righteousness meet, a world where there is a free flow of publications and of information, and of people who are willing to share the information that they possess instead of hiding it from one another.

My experience with mankind, together with my position in the society in which we live, is inclined to make me somewhat sceptical but, that does not mean that I am led to deny everybody's good will and devotion. Still, I always feel tempted to hold discussions with librarians partly due to their everlasting drive and spirit in attempting to do something with the society in which we live and, partly because they are trying to make the world in general more acceptable for all of us and, at the same time, worth while.

Was it a former hope - or was it just an unproved conviction - that, if all of the peoples of the world could read, the world itself would become a nicer and far more pleasant place to live in. Nowadays, the word 'information' would appear to me to be the catchword, or should I say, the 'magic' word which inspires librarians and politicians alike. Listening to them talk about the sharing of income, capital and knowledge, I have the idea that they give the impression of being strong enough in these ideas that they can convert non-believers into believers. Of course, within our own institutes of teaching and research, we are dealing daily with creation, transfer and digestion of information and we can rightly consider our institutions as information consuming and producing

enterprises in the following order, first consuming and then, if all goes as planned, producing. But, the question still remains, has this common work of ours inspired, stimulated or improved the world in any way? Has it directed its historic development in such a manner that we are able to afford ourselves a feeling of peace of mind and, in all seriousness, relaxation?

But, whatever our beliefs and scepticism, it is obvious that one cannot progress, one cannot create anything worthwhile, such as things that will stand the test of time, without co-operative thought, the exchange of ideas, goodwill and mutual assistance. The most intriguing question however, and one which I think is of particular concern to your conference, is no doubt the question as to whether co-operation, or resource sharing, as it is called nowadays, is just a means to an end or, is it an end in itself?

At this point in my speech, I would like to mention that, much to my satisfaction, that our University enjoys excellent relations with a great number of Institutes within the Netherlands as well as abroad and, that we are particularly proud of the fact that we have entered into formal agreements with two neighbouring universities in the Federal Republic of Germany, namely, Münster and Dortmund, the libraries of which, I gather from your conference programme, you will be visiting next Wednesday.

I wonder how the librarians of these two universities feel about co-operation themselves, and as to what they manage to realise in the practice of their daily tasks in the extension of services to their readers whilst at the same time, reducing the immense cost of collection, processing and indexing. Looking through your list of membership and the list of participants who have announced their intention to partake in this conference, I see that many of you have come from afar: the United States, Canada and New Zealand, not forgetting India and Turkey.

Should this meeting result in bringing you closer to each other and nearer to solving the problems with which you are confronted, I am convinced that your short stay in Enschede will be most rewarding, and on our part, we are happy to receive you and, are in fact, satisfied that you have accepted the invitation and taken the trouble to travel all the way from your own part of the world in order to look us up and cheer us up, for also - though we are surrounded with spirits - we have great need of your spiritual support.

Thank you.

WELCOMING ADDRESS AND INTRODUCTION TO THE IATUL CONFERENCE THEME

G.A. Hamel,

President of IATUL

Director, The Library, Twente University of Technology, Enschede, The Netherlands

Members of the IATUL, Participants of the IATUL's 8th bi-annual congress, Invited speakers, Contributors, Visiting guests, Librarians from many academic corners of the world, Ladies and Gentlemen, I am afraid that this will be a very informal opening ceremony. Nevertheless, I have the honour and it gives me great pleasure to bid you welcome on behalf of the Governing Board of the IATUL. You will not - and this may be a disappointment to you - be addressed by any celebrity from any Government Ministry, nor by the Mayor of Enschede or any of his councillors. We are just an assembly of librarians and if all goes as planned, we shall stay together as a group of librarians during the remaining days reserved for our congress.

I congratulate myself that so many colleagues from abroad have reacted to our invitation and made the decision to travel to Enschede in Holland in order to discuss such an important and, at this time, disputable subject as "Library co-operation". I am not going to flatter myself with the wishful hope that everything that will be said this afternoon, and during the ensuing days, will be in favour of collaboration. You will be hearing the word "co-operation" so many times during the course of the next few days, that I fear you may return home with the firm hope never to hear the word again, nor, and which may be much more alarming, to have to bring the idea of collaboration into practice.

However, we are just at the beginning of our conference, Ladies and Gentlemen, and now the point of "no-return" has been reached. As of this moment we are counting down. Whether this "missile" "co-operation" will ever orbit, is still concealed within the womb of time. None of us can jump off any more. Maybe this is a good metaphor to begin with and a correct picture of the actual library situation. We have come together in the present situation of interdependence, and we will have to make the best of it. Excuse me, I am not supposed to comment on the theme of the conference. My only duty at this moment is to say hello to you all, and wish you a very pleasant time in Holland, or to use the correct term, the Netherlands, for Holland is just one of the eleven provinces, or counties, comprising the Netherlands and is situated in the west of the country. At the moment we are in Twente, a region as old as any other and, which although not a province, hopes to become one soon, Government and Parliament permitting. We have been looking forward to your arrival with great interest and bid particular welcome to those who have made the effort to travel such large distances as those from New

Zealand, India, the United States and Canada. I also bid a hearty welcome to those who have not had to cover such great distances. Please feel assured that we greatly appreciate the presence of you all, and we hope that you will make new friends and find this a good meeting place and a fertile soil for your ideas. We also hope that you will have many stimulating discussions with your colleagues who, like yourselves, are struggling with the chaos of "non-co-operation", lack of understanding and shortage of personnel and funds.

There again, I am coming very close to the topic of to-day. Let me explain how we came to the decision to hold a conference on the said subject. For those of you who are less familiar with the IATUL, (The International Association of Technological University Libraries), I take the liberty of quoting article 3 of our statutes, as modified and approved in December 1968. By the way, the Association was created in 1955, some 25 years ago and not 30, as I erroneously wrote in my letter of invitation. I quote, 'The purpose of IATUL shall be to promote effective co-operation among its member university libraries'.

Here you can see that co-operation is the object and raison d'être of the Association. The questions still remain - to what purpose? Co-operation to what end? Along which lines? The Maurice Line line or any other line? Having mentioned your name Mr. Line, I would like to take this opportunity to welcome you most cordially. I happened to learn from one of my friends, who had recently paid a visit to your immense library, that you have made it a rule not to accept more than three lecturing invitations per year. Well, if this information is correct, then speaking on behalf of everyone present, we may feel pleased that you have considered us an acceptable audience.

Ladies and Gentlemen, I am not going to introduce Mr. Line yet. I hope you will forgive me if I proceed with my own "line" and attempt to explain to you why we have chosen this particular subject. In the past we came together for study conferences which were based on a tangible and therefore concrete subject such as "User Education", "On-line Bibliographic Sources", "Science to Industry" and "Library Effectiveness During the Next Decades. So, why have we now chosen this rather vague term "Co-operation" as a subject for our main and particular attention? The answer is that we would like to examine all our good intentions and analyse what we have harvested during previous years. To what extent has IATUL contributed to library networks, inter-library loans, standardization of operations, forms, cataloguing rules, provision of information and so forth?

Paraphrasing the title of Mr. Line's paper, I might pose the question: "Is IATUL a good thing?" I repeat, is it a good thing in the light of to-day's, and tomorrow's demand for co-operation? We would like to define co-operation as an act of co-operativeness. But then, one may ask, is any act of inter-library help the same as co-operation? How can co-

operation be structured so that it can endure? Is it possible to make the distinction between co-operation and co-ordination and, if so, who does the co-ordination? Are there different forms of co-operation, and is a typology necessary? In the United States one speaks of "networking". What then, you may ask yourself, is the real meaning of the word? Is it perhaps any structured state of co-operative attitudes and provisions, or does networking only cover the use of computers? Is, perhaps, co-operation only co-operation when formulated on the basis of already accepted standards? Professor v. Gils - though not a librarian himself, but a sociologist by education and profession - has been asked to present a review, to-morrow, of his experiences in the context of industrial co-operation and also of co-operation as applied in the field of non-profit-making organisations. We invited him particularly, as we have some doubts about the value of our own co-operation and would very much like to receive some expert advice as to how we should manage co-operation. As a matter of fact, we are interested in the conditions of co-operation, or, to put it in another way, we would like to learn which conditions govern success and which lead to failure. We are only too well aware of the failures of others surrounding us, but blind to the recognition of our own shortcomings. One of our most embarrassing shortcomings is that we can look in a mirror and yet be unable to recognize ourselves for what we are. For this metaphor I would like to draw your attention to the Epistle according to St. James, Chapter 1, verses 23/24. When talking about the Bible, one may ask oneself whether the Holy Scriptures tell us to co-operate and, if so, how. I could not find the word at all, at least not in Dutch reference books covering terms used in the Bible. Therefore, we can conclude that there is no Commandment, or Golden Rule which says: "Ye shall co-operate". Should we therefore give up all attempts to co-operate? Are we adept enough at arranging co-operation and, if so, does this co-operation register with those to whom co-operation may be of some avail?

Professor Mossel from the University of Utrecht will try to shed some light on that particular subject to-morrow evening. We will be leaving you alone this evening as you will be needing your night's rest following your journey and on top of that the reception that the Governing Body of the Technical University of Enschede intends to offer you, members of the IATUL, conference participants and other invited persons.

One subject to which we will be devoting our particular deliberation and study, will be the application of modern technology in the construction of large scale co-operative projects. In this respect I would like to refer to the Dutch P.I.C.A. system, to the Scandinavian LIBRIS organization and to what is referred to in the Federal Republic of Germany and Canada as the DOBIS system. The question remains, how sound are these various systems, and just what do they promise for the immediate future for those parties which, as yet, do not participate? We can extend this question to cover all existing systems and projects such as those launched by UNESCO, IFLA, FID, the U.N. family, OECD, Common Market, Euronet etc. etc. I will not mention them all, but I

expect that Mrs. Elin Törnudd will enlarge on this particular aspect during one of the ensuing days of our conference.

I will not dwell on the conference programme any longer, even though I am tempted to do so. However, I will tell you that Mr. Skipper will be talking about co-operative collection development, but, as I have already said, I will not dwell on the programme as other interested parties, non-members of the IATUL, may become envious and might wish to join our excursion to Dortmund and Münster next Wednesday. Mind you, if there should be parties interested in joining us, please contact us at the end of to-day's session.

I think I must make just one more exception in mentioning one of the items we have programmed for the closing day of the conference. We have been very fortunate in finding - at the last minute - Dr. Rugås, Director of the State Library School in Oslo, who has declared himself willing to take a stab at such a tough subject as how one teaches library students to co-operate. This causes me to heave a sigh, and I ask myself, where on earth have we actually been taught to co-operate with each other and then bring this particular attitude into practice, whether in the library field or other fields? We still have a long way to go, but if we sing in chorus instead of separately, we can shorten the distances between us significantly.

I should like, if you will permit me, to conclude with the Jewish story about a dinner party where the guests were obliged to use extremely long knives, forks and spoons. One of the company was asked to paint a picture of how he thought hell must be like and he illustrated it by describing a long table, groaning under the weight of all sorts of delicious food but, due to the length of the cutlery, nobody was able to get any of this delicious fare into his mouth. Asked again, to illustrate his idea of heaven, or paradise if you will, the storyteller once again described the same table with the extremely long cutlery, which had proved so annoying to those in hell but, this time, the guests at the table were very fortunate in that their neighbours passed these delicious courses to each other with the aid of the long knives, forks and spoons instead of trying to help themselves. This simple sketch of heaven may prove to be of help during our meeting this week, but, then again, one more warning: the way to hell is paved with good intentions. Ladies and Gentlemen, I have no doubt that a difficult and challenging week lies ahead for all of us.

Mr. Line, it is now your turn to address the audience, who have all been waiting to listen to your paper. However, before yielding the floor to you, I should like to explain that Mr. Line is the Director-General of the British Library Lending Division, that magnificent creation of Donald Urquharts', a person for whom I hold the greatest respect. Mr. Line is at present actively engaged in other co-operative projects, one of which, and certainly not the least, is the U.A.P. Bureau (short for the Universal Availability of Publications), of which he is the Director.

IS COOPERATION A GOOD THING?

Maurice B. Line

Director General, British Library Lending Division,
Boston Spa, United Kingdom

Introduction

Cooperation between libraries has always been considered a Good Thing, like belief in God and motherhood. However, belief in God is by no means universal, and a great deal more effort is nowadays spent on trying to avoid motherhood than on trying to achieve it. Similarly, library cooperation is something to which much lip-service is paid but which is practised relatively rarely, and when it is practised is rarely effective.

That much lip-service has been paid to cooperation is evidenced by the very large literature on the topic - a literature which has shown a steady increase in recent years. This is largely due to automation, which has not only enabled librarians to aim at, and sometimes attain, dubious objectives in a more 'sophisticated' (i.e. complicated and expensive) way, but also to write extensively about what they are doing - or more often what they hope to do. With both cooperation and automation, it is all too easy to start with an assumption that they are desirable and then to explore how to use them. This is the wrong way round. Librarians must first determine what they want to achieve, then specify alternative methods of achieving it, and then compare their likely costs and effectiveness. Cooperation of one kind or another may well enter into some possible solutions; so may dependence on a central service, or 'going it alone'.

What then are the main functions of libraries? Broadly they can be described as acquiring and supplying information. At present they are concerned with information mainly as it is contained in books, and the main activities involved in this are:

- 1 acquiring books - selection, ordering and purchase etc.
- 2 recording books - cataloguing and classification.
- 3 making them available - their own books by consultation and lending, books not held by them by borrowing from elsewhere.
- 4 storing books - for present and future use.

I will consider each of these activities with a view to seeing how far cooperation is likely to be helpful.

Acquisition. Items cannot be supplied unless they have been acquired by the local library or some other library from which they can be borrowed. Local

The views expressed here are not necessarily those of the British Library.

Local selection should be optimised, so that the books most likely to be wanted by or useful to a library's clients are acquired. What is most needed for efficient selection is knowledge first of local users' needs and interests, and then of potentially relevant publications, if possible before they appear, with adequate information on subject, intended audience, price, etc. Cooperation cannot help here. Local users' needs must be ascertained locally; information on publications can be obtained from publishers, from booksellers, or from a central source or sources of bibliographic information.

Availability of items that may be wanted locally but are not acquired locally requires that they are acquired by other libraries and can be obtained quickly from them when necessary. This does not necessarily require that they all be acquired by other libraries in the same country; it may in some circumstances be possible, and even preferable, to obtain an efficient supply from a foreign country.

The idea, incidentally, that much money could somehow be saved if libraries cooperated may still have some currency among those who provide the money, but it is much less popular among librarians than the concept that cooperation can achieve better provision at less extra cost than if libraries did not cooperate. The money-saving argument can be simply dealt with. What users of a library need at all frequently must be provided on the spot, not 5 or even 2 kilometres away. What they do not need on the spot is of little more use to them 5 kilometres away than 20 or 200 kilometres unless they want it urgently. The 'better provision at less cost' case is considered below. The main argument for cooperation is surely not financial at all - it is simply that no library can be self-sufficient.

Assuming for the moment that reasonable national self-sufficiency is an adequate aim, the question then arises as to how this may best be achieved. There are several possible alternatives, ranging from voluntary cooperation between a large number of libraries, through nationally funded support of a limited number of specialised libraries, to a national collection dedicated to the purpose of supplying loans and photocopies to other libraries. Acquisition schemes need not be national: they can be regional, covering a large or moderate area of a country, or local, covering only a city and its immediate neighbourhood. Regional and local schemes may be linked with national schemes; for example, regional schemes may aim at partial self-sufficiency, and be supported by more comprehensive national schemes, which may perhaps be based on cooperative acquisition between the regions.

Which model is best for a particular country must depend partly on individual conditions and circumstances, though perhaps less than might be suspected; in particular, I doubt whether the physical size of a country has much bearing on the matter. There are however some factors that seem likely to apply generally. The first is that so far as speed of access is concerned, local schemes can obviously achieve faster supply or consultation in cases of urgency than regional or national systems. Unless a conurbation has an exceptional number of good libraries, however, there are severe limits to the additional material that can be supplied in this way, and the probability that an item that is wanted and that is not held by the user's own library is available in the locality is rather small. It may be worth finding out whether another library in the locality is acquiring a particular expensive item the purchase of which is in doubt; but this is cooperation with a very small 'c'.

Except in large countries with very bad postal services, and no alternative to them over long distances, regional systems cannot usually achieve faster supply than national systems: outside a range of about 10 kilometres, it does not matter much where in a country a particular item is. Much more important is the efficiency of libraries in supplying wanted items - a matter to which I return later.

A second general factor is that cooperative acquisition schemes are much more complex and costly to administer than centralised acquisition schemes. Ensuring that significant publications are acquired somewhere in the country, and that there is no unnecessary duplication, is not a cheap or easy process. The more libraries that are involved, the more complicated the system. For this reason, cooperative schemes are likely to be most effective where they involve only a few libraries, and if those libraries already specialise in a particular subject field, possibly because they serve a research establishment or specialist institution of higher education.

However, the issue is more fundamental than that. Cooperative acquisition on any scale implies that libraries are buying material they would not otherwise be buying, for the future benefit of users in other libraries. This demands either a degree of altruism that is not likely to be sustained when money is short, as it nearly always is, or national funding to buy the additional material. But if the extra provision is to be nationally funded, the money would be better spent on acquiring it for a central collection; both actual acquisition and control of the system would be much simpler. The best known of all cooperative acquisition schemes, the Farmington Plan, enthusiastically heralded and widely acclaimed, collapsed not many years after its establishment. A further problem is that acquisition for the national good implies a responsibility for retention; these items must be not only bought but specially identified and permanently stored. Storage has its own problems, considered later.

If my analysis is correct, it suggests that the scope for voluntary cooperation in acquisition is very limited, and that for effective national provision the choice lies between centralised acquisition and a national scheme whereby a few specialist libraries are funded by the state to provide comprehensive, or at least extensive, coverage. Whether a scheme of the latter kind can be called cooperation is very doubtful; centralised acquisition certainly cannot.

Recording

A high proportion of staff expenditure in many libraries, particularly academic libraries, goes on cataloguing and classification. Faced with these high costs, most librarians have begun to consider (if they have not already decided) whether they can obtain from other sources cataloguing and classification of at least equal quality to their own, whether in the form of conventional catalogue cards like the old Library of Congress and RNB cards, or by use of the computer, off-line or on-line. This approach assumes that cataloguing and classification of this standard is desirable, and/or that it can be provided more cheaply than local simplified processing. It is at least worth asking whether the required functions - of providing the user with subject access, with bibliographical information, and with an index to the library's collection - can be performed in other ways that may be simpler, cheaper and at least as effective. In my view, it is still far from proved that users are not as well or better served by very simple catalogues, and by broad and simple classifications, as by conventional entries; or that such an alternative cannot be provided more cheaply by local processing than by obtaining entries from elsewhere. Detailed subject and bibliographic access can be provided by national and other bibliographies. Research at present in progress at the University of Bath should shed light on this very important issue.¹

Let us however assume that acquisition of records from external sources is cost-effective. The question then arises whether they can best be provided direct from national data bases, or cooperatively. Among the possible alternatives are the supply of all records from a national data base (which should also hold records of the output of other countries), and 'sub-national' systems, possibly commercial, which supply records from the national data base and additional records provided by other libraries cooperating in the scheme.

Which is the 'best' system is still a matter for debate, or rather for determination in the light of further practical experience. It seems probable that the best solution will finally involve both national and subnational systems.

In any case, individual libraries will be required or encouraged to provide records of those items that they acquire that are not already on the data base. Even in countries with the most comprehensive and effective legal deposit schemes, the national library will inevitably miss some national imprints, especially locally published items, and it will be a very long time before all countries provide machine readable records of all their own output - even if it were desirable or possible for the national data base of a country to hold or provide direct access to the records of all other countries. To the extent that participating libraries contribute records, these systems are indeed cooperative. The schemes themselves may be cooperatively owned, or managed by a particular centre with some consultative machinery, or entirely commercial. The extent of cooperation obviously varies in each case, but the common feature is that there is an efficient centre from which records are bought.

One other feature worth noting is that distance is almost irrelevant to the supply of records by computer. I say 'almost', because PTT procedures may still favour national rather than international provision, and because libraries involved in a system can exert rather more influence on its development and management if they are close enough to visit the centre and hold meetings of members.

I regard the need for cooperation in bibliographic processing as not proved, and although the provision of records from external sources can involve cooperation, the cooperative element is much less important than the central element.

Availability

Books may be made available both by consultation on the spot and by loan or photocopy. Consultation is of use only to local clients - by 'local' I mean the library's own users and others in the same conurbation. One very simple and cheap form of cooperation that a library can practise is to open its doors to other users in the locality for purposes of consultation. Fears have been expressed that such a policy would somehow result in the decimation of the library's stock or the occupation of all its seating space. I know of no case where the former has happened, and the latter has in the United Kingdom affected public rather than academic libraries. In view of the widespread praise of cooperation, it seems odd that many libraries have been so reluctant to practise its easiest form.

I do not wish to dwell too much on interlibrary lending, partly because I am in danger of spending a disproportionate amount of time on it, partly because I have written on the subject elsewhere; the following remarks therefore represent only a bare outline of a complex and important issue.

Interlibrary cooperation by means of loan and photocopy requires first that the material has been acquired. This I dealt with above, concluding that a central dedicated collection or state funding of a few specialised libraries was the best solution. Both assume substantial state funding, and the extent to which the state is able or willing to provide such funds varies greatly. Shortage of funds does not however entirely rule out such solutions. Analyses of interlibrary loan demands have shown that a high proportion of demand (between half and two-thirds) is for journals, and that most demand for journals can be met by a relatively small number of titles. In the UK, 80% of demand for journals can be satisfied by some 5,500 titles, and 90% by some

9,000 titles. Since most of these are scientific or technical, for which demand tends to be most urgent, the case for providing them centrally is especially strong. Even though many or most of the journals are acquired by other libraries, they are not geared to fast interlibrary supply, they cannot achieve the economies of scale or simplification of procedures attainable in a central collection, and the sheer burden of demand placed on them can prove too much, as has become apparent in the USA. That the USA is the largest foreign user of the British Library Lending Division, making nearly 100,000 requests a year, a third of them for US journals, certainly suggests the superiority of centralised supply. There must be few countries that cannot afford, or justify in strict economic terms, a central core collection.

How much further countries can go in centralised supply depends on the cost of provision in relation to the volume of potential demand, i.e. the unit costs. Where demand is not only low, but unlikely to grow to a high level even in response to a good service, dependence for materials outside the core journal collection must be placed elsewhere. Even then, the more demand that can be concentrated on a small number of libraries, the more efficient the system, because requesting and supplying become much simpler, demand can be monitored more easily and remedial measures taken where necessary, and the costs and problems of union catalogues are minimised. Interlibrary lending, at any rate until fairly recently, was almost synonymous with union catalogues. Indeed, the propensity of librarians to create union catalogues is so great that I have become convinced that it is innate, parallel to the bizarre behaviour of some animals for which no rational explanation has yet been found. Whenever some deficiency in supply is identified, or even when it is not, librarians instinctively start to plan a new union catalogue, without considering its costs, problems, or likely efficiency, without considering the difficulties caused to users by a proliferation of union catalogues, without exploring whether there are other means of remedying the deficiency, and without seeing whether there are not bigger and more serious deficiencies to which priority should be given. The library world is littered with the corpses of union catalogues completed long ago and never revised, and by the torsos of union catalogues that have never been completed because money ran out, editors retired or died, or libraries simply grew tired of cooperating.

Union catalogues have their place, but the more limited it is the better. Even the most centralised system cannot meet all demand, especially for monographs. Some means must be found of knowing what is in other libraries, and the only alternative to union catalogues is intelligent guesswork. This may not always be as bad as it sounds; where there are highly specialised libraries, guesswork, supplemented by the occasional telephone call, may be more cost effective than union catalogues. However, the better the central collection, the more limited union catalogues can be; in the UK, only 70 libraries, identified as having significant intakes of foreign language books, now contribute to the main union catalogue, and even they do not report the bulk of their acquisitions, which are current English language books.

I suggested above that local interlending systems could provide 24-hour access to a limited range of material, but that regional interlending systems could make little contribution to availability. Many of the requests made in a region would have to be passed on to other regions or a national system anyway, and it would seem simpler to send them directly to a national system, or to search a national union catalogue in the first place. There is no great harm in regionalisation of interlending, but no great benefit either.

How far has automation changed the picture? It enables union catalogues to be held and accessed on-line, or printed on COM. Updating is much easier, and with on-line systems so is input. The OCLC system has evidently achieved a high success rate and fast supply of monographs, and it has stimulated a rapid

growth of interlibrary loan demand. By spreading the burden of interlending among many libraries it has largely avoided over-loading a few. OCLC's evident success so far may seem to contradict what I said earlier about the virtues of centralisation or concentration on a few libraries. It must however be remembered first that OCLC's interlending system is a by-product of a cataloguing service, which is itself based on assumptions that I have challenged. Secondly, it handles only monographs, not journals, which account for far more interlending demand in most countries. Thirdly, individual libraries in the USA tend to be better funded than elsewhere, and it is largely this that makes it possible to spread demand and achieve a high success rate. Nevertheless, the OCLC alternative is a real one, which deserves very careful study in the light of the circumstances obtaining in each country.

Storage

The problem of storing large quantities of books, though it is by no means a recent one - an extensive debate on the question began at Harvard University in 1900 and continued in the USA for several years - has become a matter of almost universal concern in the last few years, affecting most academic libraries as higher education and the volume of publication have both grown at a great rate. Although the growth of both has slackened off recently, so has the money for new library buildings. Most academic libraries are reluctant to shed anything, and I do not want here to become involved in the argument whether disposal of little-used material is harmful. Assuming that a library cannot continue to house all its stock, what alternatives does it have?

One is to build, buy or rent a store, probably off campus, solely for the purposes of that individual library. Another is to donate books to a national repository, which will keep everything it does not already hold and make it available subsequently by loan and photocopy. Neither of these solutions is a cooperative one. Between these two extremes are regional and local repositories. These may be integrated - that is, the stocks of the participating libraries are combined and duplicates disposed of - or they may merely house separate collections in one building. In the latter case, no space is saved, though it may be economic and convenient to use a larger building than could be justified for a single library. Integration on the other hand is expensive, and produces relatively little space saving, because the extent of duplication within a locality or region is unlikely to be great.

With both individual and shared stores, delays in supply occur, varying from an hour or two for a store nearby with a frequent van service to several days for a remote store - and a regional store is bound to be remote for most of the participating libraries. It is difficult to see any justification for regional stores, and shared local stores seem to have few if any advantages over individual local stores. A national store can save a lot of space, but if it is not linked to an efficient lending service it becomes a sort of national refuse collection. If on the other hand it is linked with a central lending service, and preferably integrated with a national loan collection, it can achieve both space savings and a reasonably fast supply. Moreover, it can increase national availability by providing access to older books that were never recorded in union catalogues and therefore previously accessible only to the libraries that happened to hold them.

Housekeeping

So-called 'housekeeping' operations like the actual procedures used for acquisition and circulation are considered here rather than under acquisition and availability because they form a group of activities (rather than functions) to which similar considerations apply. Libraries must always have looked at the procedures used in other libraries when designing or amending

their own, but the cost of automation has greatly encouraged them to consider taking over computer systems designed by other libraries or by commercial firms for general use. Use of commercial firms is no different in principle from buying a manual system or for that matter shelving; and use of another library's system is truly cooperative only if libraries come together to design a system that will suit them all. They may also use the same computer, though the days of dispersed access and large main-frame computers seem to be over; local mini-computers are now in favour and seem likely to remain so.

Information Services

Information services are not considered last and outside my main framework because I rate them as of little importance. Rather, the scope for cooperation in information services is fairly clear and hardly a matter for dispute. At the lowest level, one library can ring another up to obtain the answer to a client's query. Such arrangements can be systematically organised; for example, a selected centre can keep an index of expertise to be found in libraries in the neighbourhood, or guides of this kind can be printed and distributed among cooperating libraries. Such schemes are common in conurbations in Britain⁵, and no doubt elsewhere. They may be cooperatively financed by membership fees, or no fees at all may be charged, with each library playing its part and the centre being provided by a large library - usually a public library - in the area.

There is no fundamental reason why such schemes should not be national, but the problems of organising and maintaining a referral network on this scale are formidable, partly because so much cooperation on the part of so many libraries is required.

Conclusion

It will be clear that I do not consider cooperation a virtue in itself. It may or may not contribute to the aims and functions of libraries. Whether it does or not can be found out by experimentation, but librarians might perhaps save themselves a lot of time and money by analysing the issues in the sort of way I have suggested. If I have tended to sound doubtful about cooperation, this is partly because I am indeed doubtful. I would like to hear much less about how libraries cooperate, and much more about why they cooperate, and what the costs and benefits are.

In presenting this analysis I have interpreted 'cooperation' rather narrowly, in the sense of voluntary cooperation between libraries on a non-paying basis. This interpretation excludes the use of centralised services (whether they are free or not) and the purchase of library services from elsewhere, because I do not see that these are truly cooperative. I also exclude coordination, which is something different. I believe that much talk of 'cooperation' is not really about cooperation at all. Note that I said 'non-paying' rather than 'free': it is one of the great fallacies current among librarians that whatever they do not pay for is 'free', whereas if all the true costs are calculated it is often found to be more expensive (and often less efficient) than services that are directly charged for. As librarians are forced to become more and more cost-conscious, and to justify what they do in economic terms, any services they render to other libraries will tend to be for payment, not free. We may regret this, but the signs are clearly visible.

You may find it strange that one who has been so intimately associated with the IFLA Office for International Lending⁶ and IFLA's programme of Universal Availability of Publications⁷ should adopt an apparently critical approach to cooperation. Are these not cooperative ventures on a worldwide scale? The answer is No, they are not. They are activities aimed at improving the

supply of documents throughout the world, and I do not believe there is any chance of significant improvement on the basis of voluntary, non-paying cooperation. The British Library Lending Division could never provide an international photocopy service, now involving nearly half a million requests a year, without recovering the costs; and it is clear that libraries would rather pay for a decent service than receive a poor service 'free'⁸. If libraries charge, they have both an incentive and an obligation to provide a good service. One of the main reasons why international availability is so poor is that most countries have very poor interlending systems to serve their own libraries. They need to improve them for reasons of efficiency and economics, and in so doing they would become able to offer a far better service to other countries.⁹ This approach seems much more likely to achieve results than heartfelt appeals to the cooperative spirit.

In the last resort, the urge to cooperate is largely psychological: librarians, like other human (and indeed non-human) beings, huddle together for warmth. We cannot of course ignore psychological factors: just as libraries are in peril if librarians ignore the psychology of users, so librarians must be aware of their own psychology, if only to make allowance for it in preferring reason to emotion. Nor would I deride huddling together for warmth.

One of the most valuable forms of cooperation is the meeting or conference at which librarians compare notes, pick up and spread ideas, and gain stimulus. This thought - that a conference on library cooperation may itself be the best form of library cooperation - makes perhaps a fitting conclusion to this paper.

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(I apologise for the large number of references to my own writings: this is motivated by the desire to avoid repeating myself excessively).

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DISCUSSION

Mrs. E. Törnudd: Do the technological university libraries have a large share in the total requests to the BLLD? We call the customer relationship with the BLLD an excellent form of cooperation.

Line: In Britain the technological university libraries are amongst the heaviest users of the BLLD, and the same is probably true for international interlending. Industrial firms are also major users.

Dr. A.H. Helal: It seems to me that there is some confusion between library cooperation and coordination.

Line: I agree that the boundary between these two terms needs clarification. Much of what is called cooperation is, in fact, coordination, which may or may not involve cooperation.

Mr. P.J.C.A. Pinxter: Mr Line, you mentioned a research project at the University of Bath concerned with whether cataloguing and classification need to be detailed, or whether libraries can provide their own simple records more cheaply, in comparison with the costs of obtaining more complex records from a central source. I found this very interesting and would like to hear more about this work.

Line: Research is being carried out both on the optimal size of catalogue entries and on the relative costs and benefits of creating local records, as opposed to taking them from a national database.

Mr. C.G. Wood: From Mr Line's thesis, it would appear that his inclination towards centralisation leaves less support for devolved systems of cooperation. In Britain one sees a mixture of central, regional and local cooperative systems which have stemmed from the policy of the British Library organization. Would you please comment on this.

Line: In the U.K. there are, as you say, central, regional and local systems. It is partly this practical experience that has caused me to analyze the effects of these alternatives. There has been, in interlending, a marked trend towards use of the central system, but this has occurred because of a free choice of libraries, not because of any wish of the British Library to impose centralization.

Dr. N. Fjällbrant: Mr Line, you pointed out the need for the analytical approach to library functions and routines. I think that it is very important to study the needs of the end user. The costs of cataloguing increase enormously with increasing length of entry, and this definitely does not make searching for material easier for end users.

Line: Yes, I am sure you are right. From the user's viewpoint, the concept developed when devising the computerized catalogue at Bath University of "minimal content - maximal access" proved highly effective: short entries with author, title and keyword points of access proved better for the user than detailed records with author UDC access.

Helal: It is quite true that the use of the short-title-catalogue supported by the KWOC catalogue is much more efficient than complete records in catalogues.

Line: Yes, I agree with you.

Mr. M.W. Hill: Is there not both need and merit in constructing, on a cooperative basis, union catalogues for unique research materials, which, in any one field, may be scattered between many libraries?

Line: In certain cases, for example, for manuscripts and incunabula, but there is a limit to the number of such catalogues that should be constructed.

Mr. P. Durey: Mr Line you commented that size of country did not have much bearing on the efficiency of interlibrary lending. On the basis of my experience in New Zealand, as compared with Britain, it is easier to achieve cooperation in a small country than in a large and complex one.

Line: This is probably true, but strong efforts have been made in large countries, such as the USA, where it seems that the main delays in interlending were due to handling procedures and supplying libraries.

Dr. Z. Kovats: I would like to confirm some of Mr Line's statements from a Hungarian point of view. The authorities tried to coordinate acquisition policies without any success. Similarly, the National Library tried to organize a coordinated cataloguing scheme which did not work out well. The most important field for cooperation is the lending and photocopying service. We also use the BLLD and I agree that the user would rather pay for a good service than have a poor free service.

Line: This is true particularly as the "free" service is not really free.

Mr. G.A. Hamel: I would like to stress that it is necessary to consider the objectives carefully, in order to achieve effective cooperation. I would like to thank Mr Line for a stimulating and provocative paper which resulted in this lively discussion.

THE ORGANISATION OF CO-OPERATION

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1. Introduction

With pleasure I have accepted the invitation of your president Mr. Hamel to give a contribution to the discussion on the topic 'library co-operation; trends, possibilities and conditions'. In this paper I will limit myself to the more general aspects of coordination and cooperation, with the hope that the framework I use will be a fruitful starting point for discussion.

The paper deals with the following questions:

1. Why is interorganizational cooperation a problem?
2. What is interorganizational cooperation? What kind of structural configurations can be established? What are arguments for tight coupling between organizations and what are arguments for loose coupling?
3. What are the main barriers to Interorganizational cooperation?
4. What models can be used to promote interorganizational cooperation?

2. Why is interorganizational coordination a problem

Both in the private and public sector we find a growing concern for interorganizational coordination and cooperation. In the public sector for instance policy-makers are confronted with the consequences of increased territorial and functional differentiation and specialization. If we look at the health care system in the Netherlands, or the welfare, or the educational system we see a whole network of more or less independent organisations, each claiming its own domain, each careful to protect its own identity and each stressing its own uniqueness. Yet, although we live in a world of organizations we have tremendous difficulties in coordinating the activities of these organisations, and establishing the interrelationships necessary to obtain societal goals. What we lack are the instruments (power, authority) for controlling these interrelationships between organizations, and we more often than not have to rely on the willingness of individual organizational members to initiate efforts in the direction of interorganizational cooperation.

The increase in differentiation and specialization has produced systems in which the problem solving capacity (dealing with technological innovation, organizational and technical complexities, re-allocation of scarce resources) of governments, central coordinating agencies or other institutions are disaggregated in a collection of subsystems with limited tasks, competences and resources, and where the relatively independent participants possess different bits of information, represent different interests and pursue separate, potentially conflicting courses of action. The problems we are confronted with cut across the boundaries of separate authorities and functional jurisdictions.

These problems are the more pressing in a period in which all Western industrial countries are confronted with an economic recession and therefore, a shortage in means to finance the complex structures on which our societies are built. We have to consider the necessity of doing away with organizational inefficiencies, to reorganize our complex systems so that they will with less costs at least maintain the same output. If we want to maintain our highly developed health care, welfare, educational and other systems we have to realize that we must find means to increase interorganizational coordination to increase effectiveness and efficiency, as we can not any longer permit ourselves to allocate unlimited amounts of public money to these systems.

Is interorganizational cooperation a major problem for the government, we can also conclude that it is of growing concern for the private sector. Structural overcapacity, growing costs and competition, complex and expensive technologies, the need for innovation, the efficient use of scarce resources, lead to a growing awareness of the necessity of cooperation between organizations to achieve coordination. The task we are confronted with in almost all sectors of our society is 'redesigning complex networks of formally autonomous, but interdependent organizations' (Metcalf, 1977). This requires extensive coordination, and redefining roles and relationships of the organizations involved in the network.

However the attempt to initiate interorganizational cooperation proves to be rather difficult. Organizations, more often than not seem to be rather powerless to initiate the necessary coordinating linkages. There often is an incompatibility between organizations due to the fact that organizations do not share the same goals, have different elite-values or do not consider their technologies and resource needs as complementary. Even when there is compatibility and complementarity in 'objective' terms, they exist nevertheless in the perception of decisionmakers and these perceptions can create real blockades.

All this brings us to our central question: what modes are there to ensure coordinated policy actions of relatively independent actors. For this we need networks of separate but interdependent organizations where the collective capabilities of a number of participants are essential for effective problem-solving or where the activities of individual units can be guided by more general policy considerations.

3. The concepts of coordination and cooperation

With coordination we try to link the activities of relatively independent units to achieve a specific goal. The following mechanisms are mostly used by organizations to coordinate their internal affairs: mutual adjustment, direct supervision, standardization of work processes, standardization of work outputs and standardization of workshifts. The choice of a specific mechanism depends on the complexity of the task to be done, the specific characteristics of the task, the way tasks are related to one another, the felt need for organizational flexibility etc. One can say there is a certain amount of 'organizational choice' in selecting the most appropriate coordination mechanisms. As coordination aims at controlling the behavior of human actors, the 'levers' for such control are power and influence.

With the term cooperation we describe the joint action of two or more parties for mutual benefit. Cooperation involves coordination. Cooperation is in its essence a voluntary act by parties involved. When interorganizational coordination becomes more and more important the willingness to cooperate becomes a necessary condition. The choice of a coordinative mechanism in a cooperative situation depends on the amount of power and influence that can be used

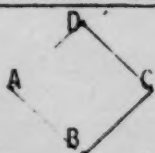
by the parties involved. In some situations coordination can be ensured by 'coercion'. The 'coerced' party has no option but to meet the preferences of the coercing party or bear some sanction imposed by that party. As coercion is in our society (fortunately) a not too preferred instrument to achieve coordination, we will have to rely on forms of cooperation. In the field of interorganizational decision-making this is not an easy task as there is not an overall authority structure to resolve conflicts. Interorganizational cooperation therefore depends very often on the outcome of multilateral bargaining between the representatives of organizations involved. Cooperation never the less depends on the capacity and willingness of organizations to solve problems that meet the different needs of various groups. Some pessimists in our society, and may be they are right, seriously doubt our capacity for developing these joint courses of action and fear that bureaucratic and centralized hierarchic control (and therefore coercion) are the only means that will work to ensure coordination.

Coordination networks (whether voluntary or coercive of nature) can differ in intensity of the interrelationships and in the kind of structure to be developed. The choice of a specific type of network depends on questions like:

- the price (loss of autonomy) organizations are willing to pay for coordinating their efforts;
- the amount of cooperation actors need to realize their aims;
- the felt need for cooperation;
- the amount of power and influence of the actors in the network.

The following major structural forms in interorganizational networks can be distinguished.

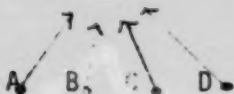
A. Horizontal structure: There is no hierarchical relationship between the participating organizations, although there can be differences in power potential. There is no central coordinating agency. Parties agree to for instance share information, coordinate their efforts etc. but each actor more or less remains autonomous.



B. Central coordinating Agency. If the horizontal structure is in itself insufficient for the coordination needs, actors can agree to create within the existing horizontal structure to establish a central coordinating agency



C. Central coordinating agency with hierarchical authority. The participating organizations make themselves subordinate to a central agency with hierarchical power. In fact a hierarchical level is created and actors have delegated some of their power to this agency.



With these three forms of coordination we have moved from a level of loosely coupled (horizontal) organizations to one in which there are strong vertical ties, to one from more or less voluntary relations to one with a high specificity of guidelines and in which a tight coupling of organizations has taken place.

There are in the field of interorganizational decisionmaking and cooperation proponents for tight and proponents for loose coupling of organizations. Those that favor tight coupling state that hierarchical control must be used to negate the tendencies of organizations to pursue narrow, and sectarian interests. Outputs that benefit the entire population served are only possible in structures where special interests are held tightly in check.

Arguments in favor of tight coupling refer for instance to (cs. Aldrich, 1977):

- The indivisibility of problems. Some problems cannot be broken down into separate pieces and if different organizations work on the problem from their own perspective one gets a series of partial solutions. Examples are pollution control, the coordination of economic development activities between government, management and unions.
- Organizational autonomy and separate authority are barriers to effective problem solution. Some observers argue that the existence of autonomous organizations and programs, each with its own protected boundaries, not only fragments problems but also creates unsurmountable obstacles to coordination. Vested and parochial interests, the defense of domains preclude effective coordination.
- Normal interorganizational transactions are focussed on organizational needs, not on the common welfare. This argument stresses that normal interorganizational transactions are on too low a level and are too issue specific to achieve coordination among organizations at the population level, even when they are ostensibly dealing with the same general problem.
- Large, dominant organizations benefit the most from loose coupling. In this argument it is argued that in the absence of authoritative, comprehensive, and planned coordination, the flow of resources in a system will benefit the all-ready well of organizations.

There are of course also various arguments that favor loose coupling:

- Minimizing the degree of coupling allows for maximum responsiveness, innovation and adaptation to the local environment. Here it is argued that a decentralized structure makes decision makers visible and accessible, thus promoting public accountability. That decentralization stimulates feedback and mutual adjustment.
- In general one can say that a loosely coupled structure is most appropriate under conditions where the environment is heterogeneous, decisions must be made rapidly and a high degree of responsiveness to demands is required.
- Duplication and overlap of organizational domains make some positive contribution in an interorganizational system.
- Here the importance of redundancy is stated. In uncertain environments redundancy can increase the probability of accomplishing tasks.

A last argument sometimes used in favor of loose coupling is that tight coupling and high centrality may mean a loss of the benefits of division of labor and specialization.

4. Some potential barriers to cooperation

Organizations or organizational decisionmakers are typically oriented to the acquisition and defense of an adequate supply of resources. Two basic types of resources are central: the necessity of money to acquire scarce resources and authority. Authority refers to the legitimation of activities, the right and responsibility to carry out programs of a certain kind. We call these claim 'domains'. The possession of a domain permits the organization (or a profession) to operate in a certain sphere, claim support for its activities and define proper practices within its realm.

On the basis of this we can hypothesize that if cooperation poses a threat to the autonomy and/or the identity of the organizations they will be reluctant to cooperate. Integration into a network will be considered as highly problematic and threatening unless organizations are assured that their overall autonomy will not be hampered or that any autonomy which they would be required to surrender would yield compensatory returns.

A second hypothesis is that if there is a lack of domain consensus between

organizations, or if organizations have no positive evaluation of each other, or if they disagree along ideological lines or if coordination threatens the maintenance of order and effectiveness in the established programmes of an organization, this is likely to preclude cooperation. Congruent expectations can be viewed as a prerequisite for cooperation.

A third hypothesis is that if there are conflicting requirements for integration in systems in which an organization has multiple memberships this will hinder collaboration with each system.

University libraries probably are members of more than one system and this frequently results in the library organization receiving conflicting demands. It has to participate in the overall network of library organizations and in the vertical programmes of the university to which it belongs. This very often can lead to forms of conflict.

One might argue that organizations are willing to enter into cooperative relationships when

- a. there is a felt need for cooperation due to environmental circumstances;
- b. if the benefits of cooperation are clearly visible and
- c. if the organization feels rather secure and has a strong power position in the network, so that it can bargain for results that are beneficial to the organization.

Yet even if conditions for concerted decision making and cooperative behavior are supportive, organizations quite often show a considerable amount of behavior which is not directed towards either problem solving or bargaining over respective preferences but which is clearly devoted to defeating the process and to making the outcome as ambiguous and innocuous as possible. Even if there is a high integrative pay off to the participating organizations emotional factors can be so dominant that organizations prefer some kind of avoidance behavior and stay oriented to the existing status quo.

One can speculate about the motives behind this avoidance behavior. Reasons often are:

- Fear for identity loss and loss of autonomy;
- Fear for bureaucratic procedures;
- A feeling that efforts to cooperation will eventually not succeed at all, and that it is a loss of time;
- Fear that cooperative efforts increase the visibility of an organization and therefore increase the organisation's vulnerabilities to attack and criticism.

5. An action model to promote interorganizational cooperation

To establish interorganizational cooperation is a difficult and in general time consuming process. The process is therefore so difficult as the participants have partly shared and partly conflicting views and objectives. They also bring into this process different policies, attitudes and beliefs, based on differences in culture, history and direct experiences. One can notice although network cooperation aims at problem solving, that bargaining between the participants is a rather common phenomenon.

Designing a successful network for interorganizational cooperation necessitates therefore the development of a frame of reference that organizations can share and the creation of mechanisms that preserves cooperation but also deal with conflict maintenance.

The question is to what extent are representatives of organizations involved in designing such a process able to handle all these constraints. If there is a distinct attitude towards problemsolving, if there are not too many

conflicting interests and if there is enough mutual trust and support designing such a process might not be so difficult. If the conditions however are more difficult it might be worthwhile to work with a neutral outsider who has the respect and support of all parties involved.

This neutral outsider should put emphasis on designing the process. Substantive or structural recommendations are less important here than process recommendations. The outsider will in general not be asked for his expertise with regards to the substantive content of the problems at stake, as this expertise is already available within the organizations themselves. The main task of the outsider is to facilitate the process of interorganizational learning.

The outsider should be aware of the bargaining elements that creep into the situation, of the fact that a win - lose situation can develop, of the strategies and tactics parties use to influence the situation or to avoid that decisions are made but which at the same time can create conflicts. In short he should be aware that the design of a process for interorganizational cooperation is in essence a political decision making process.

The task of the outsider is to establish conditions which can lead to the development of the network. An effective instrument can be to start with a working party that can be regarded as a replicate of the interorganizational network. This microcosm models the large-scale political forces and provides a mechanism for exploring the interconnections among problems and collectively thinking through ways of dealing with them (cf. Metcalfe, 1977).

The working party should deal with concrete issues on the basis of papers prepared for the discussions. The detailed analysis of these concrete problems within a specific time period helps to bring down stereotypes, to build interpersonal contacts and to recognize the structural conflicts that have to be resolved. The legitimacy of each other's claims can so be recognized and the problems of each organization better understood. Here the assistance of the outsider can be helpful in creating a frame of reference the organizations can share, and enabling them to recognize the areas in which coordination of activities can be achieved. It is important that the consultant as a neutral outsider keeps in close contact with the organizations represented in the working party, as this keeps him informed of the relevance of the recommendations made and their political feasibility.

In this short paper some issues relevant for interorganization cooperation are dealt with. It is argued that in our society it is a problem of growing concern, but at the same time a difficult political process. The action model is not the panacea for solving all the problems of designing the process of interorganizational cooperation, but a way to create conditions suitable for such a process.

DISCUSSION

Mr. S. Westberg: I agree from my own experience that one of the best ways of achieving cooperation is by starting to try to work together on specific problems. This does produce practical results.

Dr. P.J.C.A. Pinxter: When you are trying to cooperate, it always seems difficult to talk about real concrete questions with other people. Instead, all sorts of emotional aspects come into play. I am always surprised at how we cannot talk about problems openly; instead, we get avoiding actions.

van Gils: Yes, people do not behave simply rationally, but also emotionally. If you are from a large organization, you feel secure and can afford to be open, but in a small

organization there is fear that you may suffer from the results, and this gives rise to defensive attitudes. Cooperation takes a long time to achieve.

Mr. M.B. Line: Dr. Johnson referred to a man's second marriage as "the triumph of love over experience". There is a great urge towards cooperation, which is rather like marriage with more people involved, but in practice problems arise, partly because the practical benefits have not been fully calculated or emphasized, and the costs turn out to be greater than anticipated.

van Gils: Cooperation is likely to be most successful if it is forced on organizations, for example by governments, in response to economic conditions (forced marriages). The bodies concerned have to learn to live with one another.

Prof. A.J. Evans: There is a conflict in the autonomy of universities in developing new subjects or continuing uneconomic (that is small) departments, which in terms of library provision are relatively very expensive. Although the finance comes from the government and some measure of control exists, we still retain our academic freedom within the universities and the library almost inevitably has to follow the university policy.

Mr. A.C. Bubb: Is there not a conflict between the professional need to build up an independent operation and the loss of personal authority implied by cooperation?

van Gils: I fully agree with you there. There is often tension between the professional outlook on work organization and the needs of the client. When money is scarce, this results in increased conflict.

Mr. P. Durey: Professor van Gils, you mentioned the conflict which can arise, when considering a cooperative venture, in distinguishing between the interests of an individual institution and those of a wider sphere. Is it proper to take the view that, since one is employed by a particular institution, the interests of that institution should prevail?

van Gils: You always have to make choices. If institutions do not establish horizontal ties we shall never get anywhere, and it is our personal responsibility to develop these links. Conflicting links provide a continuous dilemma in which we ourselves are often quite powerless.

Dr. D. Shaw: There seem to be three possible structures for organizational control, viz:

- (i) the benevolent dictatorship
- (ii) the fully democratic system with equal voting rights
- (iii) a mixed system which is an attempt to reconcile the best elements of (i) and (ii).

van Gils: I am not quite in favour of the one man - one vote system, because the kind of problems we are faced with is not easily solved in this way. I believe in the need for centralization of authority, which enables decisions to be made and implemented, but a dictatorship has also many disadvantages, such as lack of flexibility. I am looking for a middle of the way solution - as in (iii).

Mr. G.A. Hamel: Can you give us advice as to how one can educate professionals to become more open to cooperation?

van Gils: One of the first elements is, "Is there a real need for cooperation, and is this need felt?" If there is a need, what are the issues that are relevant and concrete? Be careful to study the benefits and losses. Try to avoid emotional barriers, and be aware of the emotional aspects involved.

Mr. T.J. Tanzer: I would like to have your opinion on how to try to depersonalize problems and avoid the defense of personal points of view.

van Gils: I think you can depersonalize problems by paying attention to the problem itself - be objective. This is, of course, difficult to achieve in practice.

CO-OPERATION IN LIBRARY AND INFORMATION SERVICE - THE ROLE OF INTERGOVERNMENTAL ORGANIZATIONS

Elin Törnudd

Director of Helsinki University of Technology Libraries, Espoo

For a decade I have lectured on this very topic at the training course for information specialists organized by the Finnish Association for Documentation. Accordingly there is a risk that my presentation becomes too elementary for the well informed participants of the 8th biannual conference of the IATUL.

My second problem is, that I have first hand experience from only a few inter-governmental organizations, namely UNESCO, IAEA, OECD and the Scandinavian organizations, and have never participated in the work of decision making bodies in other IGO's.

My third problem is the great number of IGO's, the majority of which have programs in the library and information field. In fact, these programs proliferate to the extent that there is a real danger of duplication of efforts. Especially in small countries participation has to be limited to programs of highest priority - otherwise senior librarians become "visiting librarians".

In library and information business international co-operation of course is a must. Not even the largest countries or largest libraries can any longer claim self-sufficiency as regards holdings or services. Therefore, the role of international organizations, like ours, and also of intergovernmental organizations is important. The nature of IGO programs often is catalytic: developing favourable attitudes and laying down avenues for co-operation as well as preparing international instruments for the purpose. Some IGO's have also embarked on concrete programs in creating information systems or rendering information services themselves.

In the following presentation of the work of IGO's I try to limit myself to organizations and programs of interest to our daily work in technological university libraries.

1. The United Nations family

1.1 UNESCO, United Nations Educational, Scientific, and Cultural Organization

Since its establishment, UNESCO has promoted co-operation in library and information services with special reference to development co-operation. The work is financed 1) over the UNESCO budget, 2) with means from the UNDP (United Nations Development Program) and 3) of member countries' UNESCO commissions.

Among the earliest achievements of these activities are the conventions facilitating duty-free inter-library loans and exchanges of publications, and the copy-right conventions.

The non-governmental organizations, IFLA and FID, were early brought into the UNESCO picture both as receivers of modest subventions and to carry out individual projects.

During the 70's abbreviations conquered the programs. UNISIST was born on the initiative of the non-governmental International Council of Scientific Unions. The acronym UNISIST has not been abbreviated from any string of words. It can be characterized as a long term plan for the creation, through voluntary co-operation, of a global information network within the sciences and their applications, to which social sciences were added more recently.

NATIS, standing for a National Information System emerged as a kind of a competitor or complementary program to UNISIST and centered on national infra-structures and policies, and international programs like the Universal Bibliographic Control, UBC, initiated by IFLA.

UNISIST and NATIS were managed by two secretariates reporting to different departments of the UNESCO secretariate and the danger of overlapping became evident. Finally, the 19th General Conference of UNESCO in 1976 had two alternatives, namely to draw a clear border-line between the two programs or to combine the programs into a general information programme.

The first mentioned alternative would have entailed the danger of deepening the ancient breach between library services on the one hand and information services on the other, at a moment when several member countries of UNESCO worked toward an integration of scientific information supply. Fortunately the 1976 General Conference accepted the amalgamation of the two programs into a General Information Program (PGI) with a combined secretariate reporting directly to the Director of the Office of Studies and Programming.

The aim of the PGI program is to

- promote the creation of library and information policies and plans;
- promote development and use of methods and standards;
- promote the development of information infra-structures and the use of modern methods for the collection, processing, and dissemination of information, and to
- promote the education of both information specialists and users with special reference to the needs of developing countries paying special attention to technology transfer from industrialized countries to developing countries.

In addition to development aid the UNESCO programs have resulted in studies and publications. Their quality and usefulness, from our point of view, varies greatly, as the preparation is commissioned to different specialists and groups, and because they are published to meet needs of developing countries. Among noteworthy publications are:

"Education and Training of Users of Scientific and Technical Information, Unisist Guide for Teachers" by our former president, Professor A.J. Evans et al.

"Handbook for Information Systems and Services" by Pauline Atherton.

Proceedings and reports from conferences, seminars etc., listed in the new periodical General Information Programme - Unisist Bulletin reflect the lively meeting activities.

The establishment of international centers for specific questions has been encouraged - the ISDS-centre, International Serials Data System, in Paris is best known.

In addition to the General Information Programme, there are several projects launched by the sectoral parts of the UNESCO-house. In the science sector there is a small project "Science Policy Information System, SPINES" and in the social science sector preliminary work is being made on an international information system on architecture, ARKISYST. It is the task of the PGI-sec-

tion to coordinate these projects as well as others in the educational and cultural programmes.

IATUL members have contributed to PGI in several ways:

- serving as members of the Intergovernmental Council for the PGI with its working groups and of the Advisory Committee,
- preparing publications and undertaking technical assistance assignments in developing countries.

Although it is trivial, I should like to propose a technical assistance program, the aim of which would be to increase donations of duplicates from our libraries to scientific and technological libraries in the developing world. Many technical assistance projects seem to neglect "soft technologies" in that aid concerns development of local automated library systems or databanks, while access to documents is not developed at the same pace. Shipping duplicate volumes of recent periodicals and abstract journals to libraries in developing countries, which have still more limited grants for buying foreign literature than we have, would be an inexpensive form of development aid, which, however, would fill a real need. All that is needed is an organizational effort by the UNESCO PGI-section.

The second Intergovernmental UNISIST Conference unfortunately takes place concurrently with our meeting, in Paris. Its main task is to evaluate the progress made and to direct future developments. Let us hope that wise draft resolutions will be passed.

1.2 ECE, United Nations Economic Commission for Europe

The scientific and technological senior advisers of the ECE have regularly questions concerning information services on their agenda. Presently the organization does not have concrete projects in this field.

Similar regional organizations in other parts of the world have been more active.

1.3 UNIDO, United Nations Industrial Development Organization

UNIDO operates an information service for industries in developing countries. Its series "Information Sources in" for different industrial branches are useful directories.

1.4 ECOSOC, United Nations Economic and Social Council and UNCTAD, United Nations Conference on Trade and Development

ECOSOC and UNCTAD are presently active - accompanied by several other international organizations and national committees - finalizing the preparations for the United Nations Conference on Science and Technology, which will be held this autumn. Information services and technology transfer are on the agenda.

1.5 IAEA, International Atomic Energy Agency of the United Nations

IAEA was the first IGO to create an information system in which both the input and the dissemination of output are completely decentralized. INIS, the International Nuclear Information System, has become a model adopted by others. Many of us consider it a miracle that a system could be developed and maintained with such a degree of decentralization. Only the processing, checking and merging of the data are centralized to the IAEA-secretariat in Vienna².

The number of participating member countries is 60 supplemented by a dozen international organizations.

Probably all of your libraries have made use of INIS Atom-index as well as of INIS on-line which is searchable a.o. at the IAEA secretariat, at the Nuclear Establishment of Belgium, and at Helsinki University of Technology Library. We have chosen to maintain the two latest volumes of INIS on-line on the Universities' computer mainly for training purposes, because the input belongs to our duties. The database is also connected to SCANNET, the Scandinavian data network dedicated to library and information purposes, to facilitate its use in all Scandinavian countries.

1.6 FAO, Food and Agriculture Organization of the United Nations

FAO adopted the system developed for the nuclear field for its own information system AGRIS, which accumulates with about 100.000 references a year through decentralised input, while INIS input is limited to about 70.000 references with abstracts. The backup-network of libraries, presently counting 17 libraries, has been christened AGLINET, and an "Aglinet Union List of Serials" will be published shortly

1.7 ILO, United Nations International Labour Organization

ILO has created - to begin with to meet the needs of its secretariat in Geneva - a computer based information system which covers the field of ILOs activities.

1.8 UNEP, United Nations Environment Programme

The UNEP secretariat has, following the decentralized pattern, created an IR-system for locating experts and ongoing projects in the field of environmental protection.

2. Other intergovernmental organizations active in the library and information field

2.1 OECD, Organization for Economic Co-operation and Development

OECD counts as its members only Western-European countries and Australia, Japan, Canada, USA and New Zealand.

Among its working groups there used to be a Scientific and Technological Information Policy Group, which was instrumental in the 60's in opening the channels from the United States to Europe as regards the use of the American computer based information systems. In this "stone age", the use meant off-line batch processing.

This working group was amalgamated in 1977 with an earlier Computer Utilization Group and the result was ICCP, Working Party on Information, Computer and Communications Policy. The ICCP programme includes some projects of special interest to us, namely "International Databases and Networks", "Implementation of new strategies for business information" and "Changes in Government Policymaking Structures in the ICCP-field" as well as "Information to less developed countries". The main emphasis of the programme is presently on computer and communications aspects, marginal to our interests.

2.2 EC, European Community

CIDST, Committee for Scientific and Technical Information and Documentation, is better known to most of you who have participated in the planning and imple-

mentation of EURONET to commence traffic this summer. The debate of today centers on document delivery systems.

We who come from non-EC-countries hope to reach agreements making it possible for us to gain access to the many databases in EURONET-hosts.

2.3 ICSTI, The International Centre for Scientific and Technical Information of the CMEA Member Countries

ICSTI in Moscow has the task of developing methods and equipment to bring the national information systems of the member states closer to each other. ICSTI also functions as a joint International Standard Serials Numbering Centre of the member countries in relation to UNISIST³.

2.4 Council of Europe

The Committee for Cultural Co-operation (CCC) of the Council of Europe is working towards an information system in the field of education. This system is known as EUDISED.

2.5 ESA, European Space Agency

The ESRIN centre has offered the largest selection, on the European continent, of databases of interest to our libraries. I had the pleasure of visiting the centre during the Easter week and was impressed by the development plans including a.o. experiments with CIM, Computer Input Microform, combined with high speed transmission via satellite. This futurological experiment gives promise of speedier document delivery as full size copies to support on-line information retrieval.

3. Scandinavian intergovernmental organizations

3.1 NORDINFO, The Nordic Council for Scientific Information and Research Libraries

As was to be expected I cannot by-pass the IGO closest to my heart with its secretariat housed in my library. NORDINFO was preceded by NORDDOK established by the Nordic Council of Ministers in 1970. The terms of reference of NORDDOK were limited to scientific and technical information, excluding other activities of research libraries. This error was corrected in 1976, when NORDDOK was suspended and the new NORDINFO was given a wider mandate⁴.

The main emphasis in NORDINFO activities is on making grants for library and information development projects. NORDINFO's working programme has four sub-sections:

- 1) Policy development and co-ordination (a.o. forecasting future developments);
- 2) Collection building and development of location instruments to facilitate document delivery through interlending (a.o. a computerized union catalogue of periodicals in Scandinavian libraries)
- 3) Databases and networks (a.o. linking databases to SCANNET)
- 4) Education of information specialists and users (a.o. textbooks and guides)

The smaller the number of governments involved and the more similar the member countries are, as regards history, geography, culture and economy, the easier it is to further international co-operation. These conditions apply to Denmark, Finland, Iceland, Norway and Sweden to the extent, that we in the library and information business usually forget that there are boundaries between our countries.

4. Bilateral intergovernmental co-operation

Co-operative bilateral agreements are also made on the governmental level. This paper would, however, become a book, if bilateral IGO's and bilateral development co-operation would be dealt with.

5. Conclusions

Co-operation in library and information service has long been a deed of necessity and its need increases, as service requirements mount and the information flood rises, while library budgets stand still.

IGO's have played a very important role in fostering international co-operation and further progress is envisaged. The strength in IGO programs, as compared with that of programs fostered by non-governmental organizations, of course, lies in their financial and personnel resources and in the fact that member governments have agreed to do their share. These circumstances also have negative effects of bureaucratic nature.

Non-governmental organizations are needed to supplement the work of IGO's to ensure grass root involvement in programs and introduction of new ideas. IGO's should continue to delegate projects to be carried out by the non-governmental organizations in our field and increase the annual grants made to them, in order to ensure that co-operation in library and information service is developed efficiently and with creativity.

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DISCUSSION

Mr. M.B. Line: I will take up the suggestion that duplicates of journals might be redistributed to developing countries with the IFLA Section on the Exchange of Publications, as a possible contribution to the VAP programme.

Törnudd: Thanks.

Prof. A.J. Evans: Although the UN preaches collaboration, there is a need for various parts of the UN family to know about each other's work, for example between UNESCO and UNIDO in the field of training of information specialists. In the early days of UNISIST, it was a long time before IFLA and FID were involved in the discussions with ICSU and thus able to cooperate.

Mr. C.G. Wood: Regarding EURONET and the delays in the realisation of the project, can someone tell me what the latest position is - please?

Mr. M.W. Hill: At a recent meeting in Luxembourg it was reported that EURONET would be 'live' in the autumn. However, it was also said that this would be 'later'. I understand the delays were technical, on the part of contractors, and have now been resolved. One notices an increasing trend for UN bodies, especially UNESCO, to involve NGO's in their work, or, to put it the other way, for NGO's to seek UNESCO funds for their work. Do you consider this a wholly desirable trend, or are there risks?

Törnudd: Yes, it would be beneficial.

Line: The UAP programme was initiated by IFLA, but Unesco's support is vital. There is little danger of domination, because UNESCO-funded projects are carried out by IFLA and other bodies, and funds are also obtained from other sources.

Törnudd: Tied money is better than no money!

COOPERATIVE COLLECTION DEVELOPMENT

James E. Skipper

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1. Cooperative collection development

Cooperative collection development is one of the oldest forms of collaboration between libraries. The objective is quite obvious; if one library will acquire a title or accept primary collecting responsibility in a defined area, other libraries benefit by avoiding duplication in acquiring titles of marginal interest.

There is a variety of forms for what might be called cooperative collection development, depending on a definition of the term. There are instances in which a national library will collect comprehensively in response to national information needs. "Libraries for librarians," either as private corporations, or as a division of a national library, have made significant contributions to improving access to information. The Center for Research Libraries in Chicago acquires periodicals and expensive microform projects to be shared by some one hundred members and, the most successful of all, the British Library Lending Division at Boston Spa, has demonstrated to the world what can be accomplished in facilitating access to the periodical literature, and more recently, to monographs. It is interesting to observe that both institutions were brought into being despite vocal objections from the library community, although today each has achieved a reasonable degree of respectability in library circles.

Beyond the activities of national institutions there are collection development programs such as the SCANDIA plan in Scandinavia, and the program in West Germany which has assigned primary collecting responsibility for Japanese materials to Hanover, African to Frankfurt, Chinese to Marburg, and agriculture to Bonn. In the United States the Association of Research Libraries sponsors a cooperatively financed current foreign newspaper microfilming program, and there are numbers of regional acquisition compacts concerning geographic areas of the world as well as forms of publication, such as serials.

My purpose in being with you today is not to catalog the past, but to attempt an assessment of principles and problems which must be considered in any attempt to develop a cooperative acquisitions program.

I should like to observe first that there are compelling logical reasons to support the concept of cooperative collection development. Secondly, in my experience this is perhaps the most difficult of all library cooperative objectives. And third, that an effective program for cooperation in resource development can achieve its real promise only if it is fully integrated with programs for resource sharing (interlibrary loan) and preservation. A final observation is that each and all of these interdependent elements can be strengthened and made more effective through the availability of a soundly conceived computer-based bibliographic processing system offering a wide variety of services and not being limited just to catalog card production.

In amplifying these observations I will speak in terms of research libraries in general, although it is recognized that certain types of technical libraries have individual characteristics which may not be shared either with each other or with libraries of a more general nature.

One of the dominant characteristics of any library is its individuality - a source of both strength and weakness. The element of strength comes from the application of local skill, initiative and dedication in utilizing available resources most effectively in support of library objectives.

The cult of institutional individuality, however, has also resulted in significant weaknesses or deficiencies, the cumulative effect of which threatens the ability of most libraries to continue the level of support required by their constituents. For many years libraries have acknowledged that for even the greatest and wealthiest it is no longer possible to collect to the level of expectation of their users. This deficiency has been exacerbated in recent years by dramatic declines in purchasing power. Yet, these acknowledgements and economic realities have not been reflected broadly in library policies and practices, especially those concerned with the development of collections. With few exceptions, no viable alternative to attempted self-sufficiency has come forward.

The Research Libraries Group (RLG), a consortium presently comprised of Princeton, Pennsylvania, Stanford, Columbia, Yale, Michigan, and the New York Public Library, was formed in 1974 to create an alternative to local action and was based on the conviction that cooperation would be essential if these institutions were to meet the needs and expectations of future generations of students and faculty. The new consortium was controlled by what has been called the dynamics of the potted plant, or how to remain healthy under conditions of limited growth.

Programs were established for cooperative collection development, resource sharing, preservation, and the creation of a computer-based bibliographic processing system to support these integrated programs as well as library processing and eventually, on-line searching capabilities for students and faculty. The computer system was to be founded on a union catalog of machine-readable information whose quality and uniformity would be assured by members adopting the same cataloging standards, codes, and practices as those used by the Library of Congress, with individual cataloging records being controlled by a mechanized authority control system.

Programs for cooperative collection development were designed to assign responsibility for the acquisition of new serial subscriptions of secondary importance to one member in the interest of the others. Serial cancellations were reviewed to assure that no unique title of scholarly interest was inadvertently dropped and made inaccessible to the other members. In addition, collecting responsibilities for materials unrelated to local primary curricular interests were accepted by members on a coordinated basis. Examples include Latin America, South America, Africa, South and South-East Asia, Baltic languages, East Europe, publications of intergovernmental organizations, technical reports, journalism, library science, forestry, architecture, dance, genealogy and heraldry, and patents. Additional areas are under consideration. RLG also maintains a program for the cooperative acquisition of items costing more than \$200.

2. Cooperative resource sharing

I mentioned earlier that resource development is but one of several elements required to improve information access for readers through cooperative action. Cooperative collection development must be accompanied by cooperative resource sharing, or assured access at least to that segment of a collection upon which other institutions rely. The experience of the Research Libraries Group may be useful.

RLG decided that reciprocity of access, so far as possible, should govern relationships among members. An agreement was drafted concerning interlibrary loan borrowing, including photocopy, as well as conditions of direct use by qualified constituents of one library visiting another member. Each member was required to examine existing regulations inhibiting access and either justify them or make exceptions for RLG. It is significant that the Research Libraries of the New York Public Library, formerly limited to reference use within the building, agreed for the first time to lend materials on inter-library loan to RLG members. On the other hand logical exceptions to extramural access must be recognized. Rare books and fragile materials were obviously excepted, and the terms of endowments for specialized collections sometimes limited their access to reference use only.

Acceptance of a shared resources program by readers depends on the reliability of the system in delivering wanted materials within a dependable time schedule and with a high rate of fulfillment. In other words, if students and faculty become convinced that there is a high probability that their requests for materials from other collections will be delivered quickly within a predictable period of time, they will become supporters of a coordinated collection development program. In meeting this objective, RLG installed telecommunications among member libraries with document delivery being handled by a private contractor who provides much quicker service than the U.S. mail. Members give the highest priority to RLG loan requests and a library officer is responsible for reviewing the reason for each local refusal to lend a requested item. Management data were provided by a special computer program which monitors the performance time as well as the characteristics of the loan traffic. Unusual delays are investigated and remedial action taken.

The profile of the characteristics of the shared resources program among the original four members (Columbia, Yale, Harvard, and the New York Public Library), indicated that 74% of loan requests were filled within RLG; 89% were filled from the first two locations queried; photocopy accounted for 46% of the loan responses; graduate students requested 42% of the loans, faculty accounted for 23%, and undergraduates 8%. Within seven working days after requests responses were received for 82% of loan requests, with actual document delivery taking somewhat longer. It is estimated that the delivery cycle has been reduced by approximately one-half compared with conditions before the RLG system. One very significant figure is that only 2% of loan requests were in use locally - an indication that within RLG membership at least, the shared resources program caused practically no interference with local use of collections even though undergraduates were fully accommodated. It should be recognized that this data is based on access to collections which in the aggregate amounted to some 26 million volumes. Other characteristics can be expected from a different mix of libraries within a consortium.

3. Preservation

In the last half of the 19th century manufacturers began using wood pulp rather than rags. Sizings were added to the pulp to provide a better printing surface for the paper without it being realized at the time that the acids in the mixture would react with changes in temperature, humidity, and atmospheric pollutants, thus causing the paper to deteriorate over time. Today the New York Public Library estimates that fully 30% of its reference collection is in a dangerous state of deterioration and requires immediate attention if this resource is to be available to future generations of readers. The dimension and persistence of this problem requires a cooperative program on at least the national level and should be thought of as an integral component of programs for resource development and resource sharing.

Utilizing available technology, RLG allocated funds for microfilm preservation of collections under policies and procedures which avoided duplication and assured adequate bibliographic control.

4. Savings and Benefits

While it is relatively easy to determine the costs of library operations, it is difficult to quantify benefits or results. The cost savings from the cooperative acquisition of serials can be identified by making estimates of the average life expectancy of a new title and the one-time costs of selection, acquisition, and cataloging, coupled with the continuing costs of binding and storage. It has been calculated that avoiding each new subscription could save between \$800 and \$1,000 over the assumed fifteen year life span for the title. As the RLG founding members acquired approximately 3,000 new serial subscriptions a year, if 10%, or three hundred subscriptions could be avoided locally through cooperative acquisition, each member would save approximately \$240,000 - \$300,000 over the anticipated life of these titles. If these savings are multiplied by the number of libraries participating in the program the total becomes very impressive.

In quantifying the benefits from resource sharing, let it be assumed that a given library is meeting an average of 65% of the information needs of its constituents. What will be required to increase the satisfaction rate by 10%-15%? Because of unpredictability in determining which titles might meet the needs of present and future generations, it is necessary in most disciplines to collect great quantities of material, most of which will be lesser used. It is possible that in terms of expenditures for staff, materials, and space, it might be necessary to double the budget in many libraries to improve the satisfaction rate by 10% - 15%, clearly an impossible situation in these times.

However, libraries have another option which is related to the percentage of unique material found in even the smallest library. The union catalog of additions to the collections of the University of California, 1963-1967, listed 10.4 million entries, 72% of which were unique to one of the nine campuses which range in size from very large to rather small. A sampling of the monograph collections of the University of California suggested that within the four northern units, approximately 35% of the book collections existed in but one copy, and within the five southern institutions the incidence of unique items was at the level of 50%.

Within RLG it has been found that 75% of the 12,000 new serial subscriptions added each year by the original four members are unique, with only 25% being duplicated by two or more members. The aggregate serial holdings for Berkeley and Stanford, numbering 100,200 titles contain 53,500 titles (53%) which are not duplicated in the two collections.

The evident lack of duplication between major collections suggests that combining a number of institutions into an effective system for collection development and resource sharing can increase significantly the number of unique titles available to readers at a very nominal cost.

5. Problems in effective cooperation

In view of logic and compelling economic incentives, why has the concept of cooperative resource development and sharing been so slow to find acceptance among libraries?

One problem is that library acquisition policies must reflect academic programs, and as long as parent institutions fail to control duplication among their teaching and research efforts, their libraries will be forced to overlap

in their collecting activities with opportunities for avoiding duplication being limited largely to languages, geographic areas and topics of marginal interest to institutional objectives.

The development of collection development policy statements themselves are difficult to formulate and apply. They have always reminded me of Lord Coke's characterization of the English common law as being a thin stream of principle meandering through a broad meadow of exception. The problem becomes even more difficult when policies governing more than one library have to be drafted and implemented.

Perhaps the most difficult aspect of cooperative activity is one of attitude or perception on the part of library staff and faculty. The individualistic tendencies of parent institutions leads to insular attitudes concerning access to information. The dominant perception is inward-looking, resulting in almost total reliance on local collections rather than attempting to meet reader needs from a larger, cooperative pool of resources. In the absence of effective cooperative arrangements there is no realistic alternative.

Curators and selection officers frequently view coordinated resource development as a threat to their autonomy and resist cooperation in the belief that the existing strengths of their collections will be eroded. They fail to realize that the objective of cooperation is not to diminish quality, but to provide a broader resource base for readers while using savings achieved from the avoidance of unnecessary duplication to strengthen local collections.

Implicit in any plan for cooperative resource development is the need for stability in mutual commitments to collect and provide reciprocal access. Continued reliance on mutual promises over a period of years will result in serious deficiencies in information access if one of the partners subsequently finds it impossible or undesirable to honor original obligations. This situation is vividly illustrated by the library of the American Geographical Society in New York City, whose financial distress resulted in the removal of a great research collection to a new site over a thousand miles distant. Consider what would have happened if a number of other research libraries had placed primary reliance on this collection over a period of fifty years.

Eventually a consortium will be faced with the question of equity: "my library is being called upon to expend a disproportionate share of funds in the cooperative enterprise". The best answer, of course, is to recognize the problem in advance and attempt to distribute the financial responsibility as evenly as possible over a term of years.

There are also mechanical or logistical problems associated with procedures for reviewing and assigning collecting responsibilities for either individual titles or areas. The absence of sound planning can result in a system which is too expensive and inefficient to attract participation.

6. Application of technology to cooperative programs

The application of technology to labor intensive library operations is of obvious importance today, a fact which is reflected in the number of papers being given on the subject at this conference. Computer-based bibliographic processing systems have demonstrated their effectiveness in providing a card catalog service to individual libraries, however, the potential services which can be obtained from a computer system are vastly larger. It is possible to create cooperative resource development and sharing programs without the application of computer technology, but consider the advantages of being able to search electronically the order records and in-process files of other libraries to determine if a given item is being acquired by another institution. If access is assumed, unnecessary duplication can be avoided.

Cooperatively developed machine-readable data bases have also proven to be most effective in equalizing the burden of interlibrary lending. In the absence of location information there is a tendency to concentrate loan requests upon a few larger collections. The experience of OCLC in the United States indicates that the availability of location information in a data base leads to loan requests being sent to smaller collections closer to the site of the requesting library. Manual union catalogs used to locate sources for loan requests have become increasingly expensive and inefficient and many have been abandoned.

Librarianship is on the threshold of a widely expanding use of computer technology to improve services. However, a number of significant problems remain to be resolved, many of which are political, rather than technical in nature.

It is assumed that future library service will be dependent upon the ability to develop cooperatively machine-readable data bases to serve a range of bibliographic needs of participating members, and that these data bases must be linked effectively together so that queries not satisfied by one file will be automatically switched to another.

Within the context of a cooperatively created data base it is unlikely that any one library can accept responsibility for totally comprehensive collecting and cataloging for all areas. This means that an effective data base will depend on the assignment of responsibility for cooperative resource development and cataloging among a group of libraries. And, for the data base to enjoy maximum utility, the bibliographic records contributed should be created under cataloging standards, codes, and practices accepted by institutions involved. Greater bibliographic uniformity can be assured by records having to pass through a mechanized authority control system.

Just as no one library can be responsible for establishing a comprehensive data base, no single data base itself will contain all the information which may be wanted by readers. For this reason the files must be linked by the adoption of communications protocols to facilitate message switching between networks and their data bases, without being inhibited by differences in terminal hardware.

The ultimate objective, for RLG at least, is a computer-based system which can be searched directly, on-line by patrons for specified types of inquiry. It is recognized that for the immediate future the cost of on-line searching for readers will be prohibitive and alternatives to the card catalog such as computer output on microfilm (COM) may be considered.

In North America and Western Europe a number of computer-based bibliographic processing systems have been developed which required a decade or more of effort and the expenditure of several millions of dollars each. RLG decided that it would be unwise to duplicate this effort if an existing system could meet the performance specifications which had been established. After an intensive review of candidate systems by committees and independent consultants, RLG selected the BALLOTS system developed by Stanford University, which has recently been incorporated into the Research Libraries Group as the Research Libraries Information Network (RLIN). The objective is to further develop RLIN into a full network capability to meet the needs of research libraries in the United States.

7. The Research Libraries Group

I have referred to the Research Libraries Group several times in an effort to illustrate concepts of principles. RLG itself is not offered as a pattern which can be superimposed on other organizations, although many of its aspirations and objectives will be common to any library consortium devoted to

cooperation. I would, however, like to suggest one essential difference between RLG and other cooperative efforts. Most attempts at library cooperation rely too frequently on professional sentimentality and rhetoric. The programs are accepted without sufficient budget or internal commitment; they are added to on-going library operations and have very low performance priorities. Local policies and procedures which inhibit effective action in the pursuit of common objectives remain unchallenged and unaltered.

The ultimate success of RLG has yet to be established. There are many technical, political, and financial questions to be resolved. But, if there is any unique feature in characterizing the Research Librarian Group, it is the depth of commitment which has been made by members to change local policies and procedures if necessary in achieving cooperative goals and in making the whole of RLG greater than simply the sum of the parts.

DISCUSSION

Mr. M. Hopkins: What administrative machinery enables the RLG to function?

Skipper: Administrative machinery is based on what may be called a 'consensus environment', in which each participatory library agrees, mainly through the medium of various committees, to the methods to be adopted.

Hopkins: How is this paid for, by the member libraries or otherwise?

Skipper: As for costs, each institution contributes staff-time and approximately \$6,000 per annum for staff travel. In addition, various foundations have contributed about \$3,500,000 since the start of the RLG.

Prof. A.J. Evans: Have you determined the total costs of one inter-loan?

Skipper: Yes, approximately \$4 to place the loan and \$8 to make a loan. Plus the cost of photocopying. These are total costs.

Mr. M.B. Line: Does the New York Public Library lend, as a last resort, among RLG members?

Skipper: No it takes its normal share.

Line: What is the total volume of interlending traffic?

Skipper: About 12,000 units per annum.

Line: What is the ratio of books to journals requested on inter-library loan?

Skipper: 35 % books; 65 % journals.

Line: What is done with the 26 % of interlibrary requests not met by the RLG?

Skipper: They go to the Library of Congress for checking with the National Union Catalogue. If that fails, other major collections are tried. Some requests end up at the British Library Lending Division.

Line: How are loans and photocopies moved physically round the system?

Skipper: The United Parcels Service.

Dr. N. Fjällbrant: What is the average length of time for an interlibrary lending item reaching the borrower?

Skipper: About 14 days. Messages of availability are returned within 4 to 5 days.

Mr. C.G. Wood: Do you operate a shared cataloguing system? How does this fit in with the New York Public Library System?

Skipper: We are operating a shared cataloguing system. Although the NYPL cataloguing system was acknowledged as being at a very high level of sophistication, it was decided that the end product was directed towards producing a catalogue and print-out facility. As a variety of end products was desired by the RLG, it was decided to develop the more generalised BALLOTS system from Stanford. This system will be 'live' in some four months time.

DOBIS AT THE BIBLIOCENTRE

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To fully understand why and how the Bibliocentre came to use DOBIS one must first learn about how the Bibliocentre came into being, what it was intended to do and how it has evolved in relation to the emergent needs of its users.

In 1966 the Ontario Government perceived a need for education of a technical and vocational character as opposed to the traditional academic university education for post-secondary students. An act was passed to create a community college system throughout the Province of Ontario. The result was the establishment of a network of 22 Community Colleges dedicated to providing job related post-secondary education. It was recognized that library resources for these new colleges had to be acquired quickly and efficiently. During 1966, therefore, a short term project was undertaken by McMaster University, Hamilton, Ontario to select, order, acquire, catalogue and process a small basic collection of items which would be duplicated in each of the libraries at these newly created colleges. At the conclusion of the McMaster Project, the decision was made to create a centralized technical services facility to perform all of the tasks handled under the McMaster Project, with one exception; book selection would be the responsibility of each individual library. The College Bibliocentre was the name given to this centralized facility. Although funded initially by the participating colleges, it was later funded by the Ministry of Colleges and Universities. At that time it was managed by an executive group within its own corporate structure, but operated under the stewardship of one of the Community Colleges. Its mandate and objectives were clearly defined and to date read as follows:-

1. To act on behalf of the participating Colleges as the central processing and cataloguing unit for all College resource book and non-book materials.
2. To act, as requested, as the central acquisition unit for book and non-book materials required for resource centres.
3. To ensure that the Bibliocentre databases are restructured and information is retrievable to meet the information needs of the Colleges.
4. To act in consultation with the appropriate staff at the Ministry of Colleges & Universities as a publisher/distributor of College - produced learning packages establishing copyright procedures wherever necessary.

Its community of users was defined as the libraries within this Community Colleges structure and that of Ryerson Polytechnical Institute, a major technical college which had been training skilled technicians in many job related fields for many years prior to the establishment of the Community Colleges. The present day user population numbers 105 individual campus libraries.

The Bibliocentre was fortunate to be in existence prior to the opening of some of the colleges, and most of the libraries. Only one large collection existed, this at Ryerson Polytechnical Institute. It meant therefore that in establishing a centralized technical services facility, standardized procedures could be developed and implemented without conflicting with a multitude of existing user procedures. Standards and procedures were developed, and a concentrated effort was made to build expertise in all of the technical services functions. The object was to give the Bibliocentre a high standard of competence in ordering and acquiring resource materials, both book and non-book media,

verification of derived records, and original cataloguing according to Library of Congress subject headings and Anglo American Cataloguing Rules. By its mandate the Bibliocentre was made virtually a technical services extension of each library of its users group. The bibliographic and location details relating to the holdings of the basic collections acquired through the MacMaster Project were held at the Bibliocentre, but on a manual file. As items were ordered, received and catalogued through the Bibliocentre facilities, the bibliographic data and location detail for all such items were added to this manual union file, and over 13 years these unique bibliographic records have grown to a total of 400,000.

It was found that of all items being processed, 60% of the total Bibliocentre workflow had previously been processed through its facilities. The importance of this to the operation, lay in the fact that 60% of the workflow did not need to pass through the hands of editors or professional cataloguers, but could be identified and processed by clerical personnel.

Since the Bibliocentre had no control over individual library book budgets, it also had no control over incoming workflow. Therefore from the earliest days following the Bibliocentre's inception, it became apparent that the Bibliocentre must automate to cope with the large but variable number of items to be processed, 100,000 to 130,000 a year or 500 plus items a day. In 1971 the first automated system was installed. The manual order and acquisition facility was converted to a batch process computer system operating through computer time purchased from an outside agency. This system fully controlled an item from the ordering stage to shipping including the production of financial reports and statements as well as shipping invoices for the total cost of each item to the user.

Between 1972 and 1973 the ability to automate all aspects of the operation was established when the retrospective bibliocentre data contained in the manual union catalogue was typed in MARC format and was either located on an LC-MARC tape, or read through an optical scanning device. All of these records were then mounted into the University of Toronto Library Automation System (UTLAS), an automated bibliographic service facility.

In 1973 the Bibliocentre switched from any further dependence on the manual system, to the completely on-line environment offered by UTLAS.

It was hoped that the Bibliocentre could now begin to offer benefits from the union database, which it had built up so carefully over the years, with the loyal support of its users. One such benefit was the capacity to produce a catalogue by Computer Output Microform (COM). Ryerson Polytechnical Institute was the first Bibliocentre user to make the decision to close its card catalogue. The Bibliocentre manipulated the bibliographic records in its automated database through the facility of its outside agency (UTLAS) and produced a COM catalogue for Ryerson in 1974 in three sequences, subject, name and title. Other users began to show interest in this and other developments and requests for computer produced subject and media listing, etc. followed.

In April 1975 the Bibliocentre became a fully operating division of Centennial College of Applied Arts and Technology. At that time the Order and Acquisition System was being handled in one service facility and the bibliographic database was being handled in another. This represented duplication and limited the capacity to respond to the growing demand for output from the librarians. Management realizing that accepted technical services functions were being rethought professionally and because of the size of the operation decided that every effort must be made to bring the two automated systems in house, and hopefully at some time to combine the two into one system. To this end, the order and acquisition system was mounted on the College's IBM 135 computer, during 1975, where it continues to run as a batch system. Investigations were carried out with the co-operation of the National Library of Canada on the Searching and Cataloguing modules of the DOBIS system. The version of DOBIS adapted for the National Library of Canada to include Canadian MARC format capabilities was mounted in a research mode, also, on the College's IBM 135 computer, and a period of vigorous testing commenced.

What did we find when we started looking at DOBIS? Briefly stated, we found the following. A highly sophisticated system which, using a single shared database concept, is designed at present to handle searching and cataloguing, and in the future all library automation requirements such as circulation, order and acquisitions, periodicals and serials control, and inter-library loan, all in an on-line environment. An important characteristic of the system lies in the acceptance of bibliographic data into two distinct but linked structures.

One structure consists of a series of eight basic access point files: names, titles, subjects, publishers, classification numbers, International Standard book numbers (I.S.B.N.), Library of Congress card numbers (L.C.C.N.), and Miscellaneous numbers.¹ Any specific element of data is carried only once in its appropriate access point file regardless of the number of documents within which the specific element is contained. These eight access point files, as their names imply are immediate routes into the specific document within the database.

Fig. 1.

DOBIS ACCESS POINTS

NAMES
TITLES
SUBJECTS
PUBLISHERS
CLASSIFICATION
ISBN/ISSN
LC CARD NUMBERS
OTHER NUMBERS
DOCUMENT NUMBERS

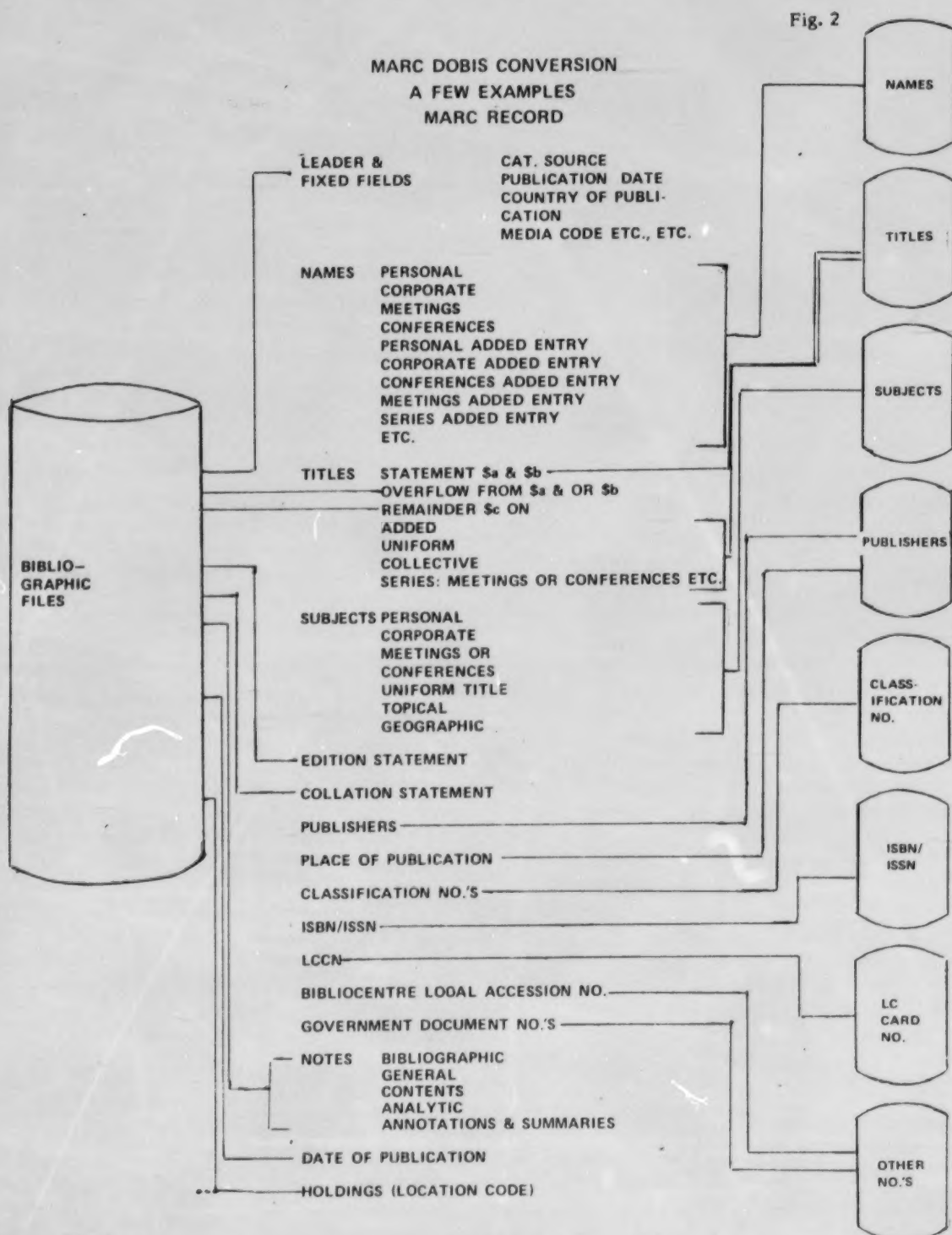
Furthermore, it was found that by changing an element once in the access point file, the element automatically appeared correctly in all the documents in which it occurred. It was also noted that an authority file structure existed for the data held within the access point files, and that such authorities could be established during the routines in cataloguing new documents. An exciting asset was recognized in the ability of the DOBIS system to permute entries in two of the access point files. This simplifies the search routine, making possible, for example, a search on a single word of a title.

The second structure contains the bibliographic files. Within this structure is found only the bibliographic data which relates uniquely to a particular document, i.e. the notes, etc., and the pointers to the shared data in the access point files. The way DOBIS manages data by eliminating repetitive data within each structured bibliographic record, makes it possible to mount records on less disc space than other systems.

Other benefits include the ability of the system to lead the terminal operator through all procedures including the MARC coding, in an easily understood dialogue type of communication, which is presented logically on the screens, the translation of such dialogue automatically into the DOBIS coding structure; and the existence of a security level system designed to enable different functions to be controlled according to an individual's designated function or capability to ensure security of data. The advantages of such facilities are significant. Easier and shorter training periods as well as fewer data entry errors are bound to increase productivity.

The outcome of this testing was the decision to purchase an IBM 148 2 megabyte computer in 1978. This facility is now installed and fully dedicated to running DOBIS in-house at Centennial College for the Bibliocentre operation. A copy of the entire Bibliocentre database (400,000 records) was purchased from the external automated

system service (UTLAS), where it had been stored. Arrangements were made for a weekly up-date tape to be supplied to keep the total database current. It was requested that both the weekly up-date tapes and the entire database be supplied to the Bibliocentre as it had been input, in MARC. Programming and systems designing began in earnest to make the changes and modifications necessary for the Bibliocentre's specific operation. The first task to be tackled was the translation of the 400,000 record database existing in MARC format to the DOBIS structure. To decide where the data was to rest in DOBIS, decisions had to be made individually for each of the MARC tags plus each tag's individual subcoding and indicator structure.² Differences between MARC format and the adaptation of the format by the agency housing the Bibliocentre database had to be reconciled, so the information would not be lost or misinterpreted into DOBIS.



The problem of the constraints within DOBIS to accommodate only 255 characters in the titles access point file was resolved. Two title note types (title overflow and title remainder) were created in the note structure. The title overflow note type^a handles the 255th character and those remaining in the MARC tag 245 \$a and \$b exceeding the character limited. The title remainder note type^b accommodates all characters in MARC tag 245 \$c and on.

CATALOGING NOTES

BIBLIOGRAPHIC NOTES

Fig. 3

1	TITLE OVERFLOW	
2	VOLUME DESCRIPTOR	
3	MEDIA CODES	
4	EDITION STATEMENT	FRENCH EQUIVALENT NOTES
5	COLLATION	
6	GENERAL NOTE (ENGLISH)	15. GENERAL NOTE (FRENCH)
7	BIBLIOGRAPHY NOTE (ENGLISH)	16. BIBLIOGRAPHY NOTE (FRENCH)
8	CONTENTS NOTE - COMPLETE (ENGLISH)	17. CONTENTS NOTE - COMPLETE (FRENCH)
9	CONTENTS NOTE - INCOMPLETE (ENGLISH)	18. CONTENTS NOTE - INCOMPLETE (FRENCH)
10	CONTENTS NOTE PARTIAL (ENGLISH)	19. CONTENTS NOTE PARTIAL (FRENCH)
11	ANNOTATION (ENGLISH)	20. ANNOTATION (FRENCH)
12	PHOTO-REPRODUCTION NOTE (ENGLISH)	21. PHOTO-REPRODUCTION NOTE (FRENCH)
13	PRECIS RINS (BIBLIOCENTRE)	
14	PRECIS SINS (BIBLIOCENTRE)	
		CONTINUED
22	STOCK NUMBER	36. NLC SUBJECT CODES
23	CATALOGING SOURCE NAME	37. PRODUCTION STATEMENT
24	COUNTRIES OF PUBLICATION	38. SOURCE NAME AND ADDRESS
25	CHRONOLOGICAL COVERAGE CODE	39. DURATION OF SOUND RECORDINGS
26	FORM OF COMPOSITION	40. DESCRIPTION - ARCHIVAL FILMS
27	NO. OF INSTRUMENTS - CHAMBER MUSIC	41. SUBSCRIPTION PRICE - SERIALS
28	NO. OF INSTRUMENTS - ENSEMBLES	42. RENTAL PRICE
29	NO. OF INSTRUMENTS - SOLOISTS	43. BOUND WITH NOTE
30	NO. OF INSTRUMENTS - SOLO NO ACC	44. DISSERTATION NOTE
31	CANADIAN CONTRIBUTORS	45. BIBLIOGRAPHIC HISTORY NOTE
32	LC COPY STATEMENT	46. LIMITED USE NOTE
33	NLC COPY STATEMENT	47. CREDITS NOTE
34	NAL COPY STATEMENT	48. REVIEWS-ARCHIVAL
35	NAL SUBJECT NUMBER	49. CAST NOTE

CONTINUED

50 ARCHIVAL CATEGORY - NON FICTION	64 TITLE REMAINDER
51 ARCHIVAL CATEGORY - FICTION	65 ANALYTIC NUMBER
52 RECORDING SESSIONS	
53 CENSORSHIP NOTE	
54 LINKING ENTRY NOTE	
55 LOCAL NOTE - ARCHIVAL	
56 PRECIS SINS - NLC	
57 PRECIS RINS - NLC	
58 SORT KEY INFORMATION	
59 FOREIGN MARC INFORMATION	
60 LANGUAGE CODES - MULTILINGUAL	
61 LANGUAGE CODES - TRANSLATION	
62 GEOGRAPHIC AREA CODES	
63 DATE FROM IMPRINT STATEMENT	

It was decided to permute only corporate names, and multiple surnames within the Names Access Point File, but in the Titles Access Point File to permute all entries on each word within the entry, up to 254 characters, except for those words appearing in the stop word list. A stop word list was compiled so that commonly used words such as encyclopedia, handbook, history, science, etc., as well as articles would not be permuted. A table of symbols to be translated by DOBIS in the printing of diacriticals was developed. Diacriticals were entered into the bibliographic files by using the symbols of this table.

Once the decision making process was completed and the DOBIS format finalized, programmes were written to load the records onto DOBIS, to create error messages when the data being loaded did not meet pre-determined loading criteria, and to reject any record that obviously did not fit into the designed format. These loading programmes used the DOBIS batch programme "Reorg" which was already available, and not the DMARC interface facility, because production at the Bibliocentre could not stop whilst conversion was taking place. New programmes were added to DOBIS to accommodate Canada's bi-lingual situation and the handling of the location information for the 105 different user location codes. The existing copies facility available within DOBIS could not be used because it was not suitable to meet the location entry requirements relating to such a large number of users. Specifications were written for output products, including the actual formatting of all the catalogue cards (main entry, title, subject(s), added entries, analytics, etc.), spine labels, book cards for manual circulation purposes and punched cards for automated circulation support. Output products programmes were written to these specifications to produce output in real time. The Bibliocentre allows for an individual profile for output products for each of its users. The combination of the number and type of cards within a card set therefore differs from user to user. Up to five main cards plus one card for each added entry, subject or title as well as analytic cards can be provided. In addition, users may request either French or English subject headings for French language material. The exclusion of any category is possible according to individual needs. The same user choice applies to the production of a spine label, a book card for a manual circulation system or punched cards for automated circulation control. Each users profile carries the local requirement for the output products available: all, none, or some. A table containing each user's output profile was built into DOBIS. These programmes were written for machine decision making to be modified by the operator, only in the case of exceptions to the profile.

Output programmes had to cope with the decisions already made in designing the DOBIS format. For example, although the decision was made to put title overflow and title remainder into the notes within the bibliographic file, this data had to be retrieved, and printed in its correct position on the catalogue cards.

The Bibliocentre through the years had been inconsistent in applying punctuation to its data. It was therefore decided that during the load programmes, DOBIS would strip all existing punctuation between fields and sub-fields, and that the output programmes would automatically print the correct punctuation in accordance with the rules laid down in the International Standard Bibliographic Description (I.S.B.D.). Programmes were written to make this possible.

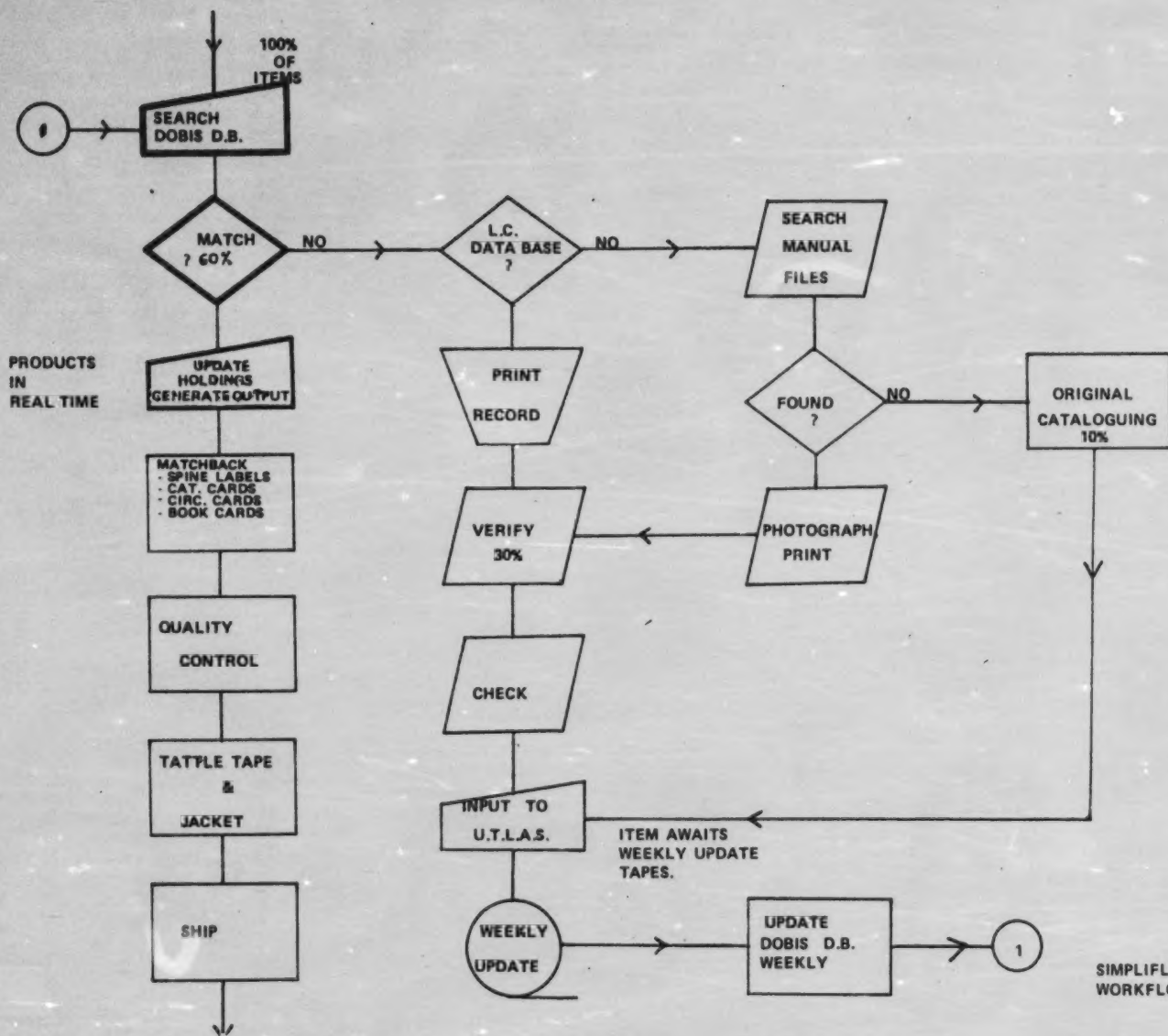
Staff training on the DOBIS system was undertaken in a pyramid type mode. It was started at the Supervisory level and progressed downwards through the organization. The staff were enthusiastic with features such as the ability to move the cursor backwards and forwards to error positions, making it easy to insert and delete data. The ability to chain command was soon discovered, and the dialogue screen facility made the training easy. It took minimal instruction time, and two hours of practice to train a staff member to locate a correct bibliographic record for an item within the database, to add copy information, and to order output products. Before long, these terminal operators were forming chain commands and exercising them through the PF key functions available on the IBM 3278 terminals.

During March 1979 transition from the testing parallel mode to live production was successfully and easily made. The entire database (400,000 bibliographic records) was mounted onto DOBIS in approximately 48 hours. Some interesting statistics evolved from

this load:

Records totally rejected during load	148
Records in Names Access Point File	444,941
Records in Titles Access Point File (includes permutations)	1,444,524
Records in Subjects Access Point File	162,439
Records in Publishers Access Point File	66,141
Records in Classification Access Point File	411,198
Records in ISBN Access Point File	135,956
Records in Library of Congress Card Numbers Access Point File	219,936
Records in Miscellaneous Numbers Access Point File	436,771
College location codes added	approx. 1,500,000

At the present time DOBIS is being used to process any item located on the Bibliocentre (DOBIS) Database. As I have already mentioned, that accounts for 60% of the workflow,⁴ (350 plus items per day). All incoming items are taken from the receiving area directly to the six DOBIS IBM 3278 screens. The DOBIS terminal operators search the database for a record. If the record is located, the copies information is added to the bibliographic record and one command signals the output products requirement according to the user profile. These output products are produced in real-time. The catalogue cards are printed on an IBM 1403 printer equipped with an American Library Association (ALA) print train. The punched cards, for users who have automated circulation systems are produced on an IBM 1442 read/punch, while the book cards for manual circulation, and spine labels, are produced on two IBM 2741 typewriter terminals.



SIMPLIFIED C.B. WORKFLOW

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If the item is not located on the DOBIS database it passes to the bibliographic searching area where a search is made for an agency record such as Library of Congress or National Library of Canada. Necessary changes are made to any such record to reconcile it with Bibliocentre practices. If an agency record is not found the item is originally catalogued. In these instances the items are shelved to await output products through DOBIS processing, while the records are entered into the UTLAS facility in the MARC format, and are brought to the Bibliocentre weekly on an up-date tape. The records from this up-date tape are then fed through the load/update programmes into DOBIS. Once the records are mounted on to the DOBIS database, the correct record is located through DOBIS by the terminal operator, holdings details are added, output products are ordered in real time and the item joins the regular processing flow.

As items are processed through DOBIS they are collected at the matchback area and left in the six separate sequences identified by terminal operator number. Because output products are produced in real time, the number of actual items collected at any given time in any one sequence is very small. The catalogue cards have the same terminal operator number printed on the face of each card, so it is an easy task to band individual cards into card sets and match them to the other output. The call number is used as the identifier for the various output products and this matchback process creates no problems as all output is printed in the same sequence. The output "kit" is now matched to the item using the operator number as an identifier. The remaining stages of processing, quality control, jacketing and tattle-taping are completed, and the item is ready for shipping. The production of the output products in real time for all items on the DOBIS database decreases time required to hold an item in process from a minimum of 10 days to only 1 day.

Editing on-line through DOBIS to existing Bibliocentre records is a daily task. For the first time, like entries are gathered together for browsing in the access point files, and the inconsistencies are all too apparent. Many errors have been made over the years, not only input errors, but errors relating to the choice of entries and the form of entries used, as well as in applying MARC coding. Using the existing security level system, senior technicians are beginning to clean-up these errors, and are considerably helped by the organization of data within DOBIS. This clean-up work is progressing quickly and efficiently because of the ability of DOBIS to change the relevant data in all the documents sharing a common access point file entry, when the single access point entry is changed. Using the same mechanism, the Bibliocentre will be changing out-dated Library of Congress subject headings to current subject headings as such changes are announced. The implications of changing cataloguing rules as presented in Anglo American Cataloguing Rules² are enormous and many technical service units are already wondering how they can cope with such changes. Through DOBIS the Bibliocentre feels it has some chance to make at least the most important changes retrospectively because of the access point file change facility.

Through the load programmes used for the conversion to DOBIS, some data was automatically entered into the access point file authority structure. As clean-up progresses, such authority files will be further developed by adding authority notes and cross references.

The Bibliocentre is using DOBIS for regular maintenance related to the location of the actual items held by the 105 users. The user notifies the Bibliocentre when items are withdrawn from the library, or are transferred to another campus location, and the relevant changes are made quickly and efficiently on the DOBIS database.

In preparation for LIBIS, one of our users has a remote screen installed and while waiting for LIBIS the screen is being used to access the database for order verification purposes, as well as a searching tool to support public service work.

The Bibliocentre has one other operation that I have not as yet discussed. It warehouses, distributes and prints Individualized Learning Packages on behalf of various levels of government or government sponsored agencies. These Learning Packages are structured

study courses in job related subject areas designed to be used both individually and in the classroom. The Bibliocentre, realizing the great flexibility of DOBIS, found that it was possible to structure the details of these Learning Packages into a compatible format with existing bibliographic records, and to enter the Learning Package details into the 400,000 DOBIS database. The individual numbers (put into the Miscellaneous numbers file), author, title, publisher, and subject information fitted into the existing bibliographic structure through the access point files. Anglo American Cataloguing Rules and Library of Congress subject headings governed the entry of this data into DOBIS. The choice of notes was extended, keeping these learning package notes not only completely separated from the bibliographic notes, but signaled differently and displayed on a separate screen after the bibliographic notes choice screen. The Learning Packages extended notes include, duration of course, learning objectives, related employment opportunities, details of diploma or certificate issued on completion, entry requirements, etc.⁵ The availability of such Learning Packages is now apparent by searching the access point files through the DOBIS on-line environment. To enable these Individualized Learning Packages to be quickly identified when browsing through the access point files, a set of initials depending on the government agency producing the package, was affixed to each title. A skip in filing was exercised at input, but as these initials display on the screens the Learning Packages data is easily found.⁶ Such a procedure was developed because of the large database, and the relatively small number of packages (2,000). To scatter such information throughout 400,000 records would have made quick retrieval difficult without the prefix initials. Because its data shares the same files as the bibliographic data, it is possible to see not only details on the availability of Learning Packages in specific subject areas, but at the same time the availability of library resource material to support such courses.⁷ The addition of more Learning Package data is continuing on-line through the cataloguing module. This data is already proving to be of great value to the departments who initiate and sponsor such packages. DOBIS on displaying the availability also demonstrates the lack of such learning packages in specific subject areas. It is expected that because of this high visibility the authors of Learning Packages will be better able to respond to such needs. Faculty and guidance counsellors will have the use of this data, as well as government agencies responsible for retraining.

CATALOGING

Fig. 5

NOTES

BIBLIOGRAPHIC NOTES *** FOR LEARNING PACKAGES ONLY ***

100	DURATION	114	PERSONAL APTITUDE FACTORS
101	CERTIFICATE	115	PERSONAL INTEREST FACTORS
102	ENTRANCE REQUIREMENT	116	PERSONAL TEMPERAMENT FACTORS
103	OCCUPATIONAL POSSIBILITIES	117	FUTURE OUTLOOK
104	PURPOSE	118	COLLEGES OFFERING THE PROGRAM
105	TERMINAL PERFORMANCE OBJECTIVES	119	SEEKING EMPLOYMENT
106	INTERMEDIATE PERFORMANCE OBJECTIVES	120	GATB PROFILE
107	INDIVIDUAL PROGRAM INSTRUCTION	121	SOURCES OF INFORMATION
108	JOB DEFINITION		
109	RELATED OCCUPATIONS		
110	ENVIRONMENTAL CONDITIONS		
111	PHYSICAL ACTIVITIES		
112	WORK WEEK		
113	SALARY		

SEARCHING
TITLES

Fig. 6

1	DIAMOND CUTTERS A CABBAGETOWN PLAY	1
2	DIAMOND DRILL HANDBOOK	3
3	CCDO DIAMOND DRILL OPERATOR *	1
4	DIAMOND DRILLING INDUSTRY	1
5	TIP ASSISTANT— DIAMOND DRILLING OPERATOR'S PROGRAM (SURFACE) *	
6	/ DIAMOND FEATHER; OR, THE DOOR IN THE MOUNTAIN A MA	1
7	DIAMOND GIRL (PHONODISC)	1
8	DIAMOND GRINDING RECENT RESEARCH AND DEVELOPMENTS	1
9	DIAMOND HITCH	1
10	DIAMOND HUNTERS	1
11	/ THE LION FEEDS THE DIAMOND HUNTERS. EAGLE IN THE SKY. GOLD MINE. S	
12	DIAMOND IN THE ROUGH THE CAMPBELL RIVER STORY	1
13	DIAMOND IN THE ROUGH (PHONODISC)	1
14	/ ILLIAN RUSSELL AND DIAMOND JIM BRADY IN AMERICA'S GILDED AGE	

*Denotes Learning Packages

SEARCHING
SUBJECTS
SHORT INFORMATION

Fig. 7

WELDING

187 DOCUMENTS

E 1	HORWITZ, HENRY	WELDING PRINCIPLES AND PRACTICE	1979
E 2	AMERICAN WELDING SOCIETY	STRUCTURAL WELDING CODE—STEEL	1979
E 3	ALLEN, B.M.	SOLDERING AND WELDING	1978
U 4	CENTENNIAL COLLEGE LEARNI	TIP WELDING TECHNOLOGY *	1978
U 5	NORTH WEST TERRITORIES	TIP WELDING PRE—EMPLOYMENT COURSE DEVE *	
U 6	CENTENNIAL COLLEGE LEARNI	CCDO LAYOUT, FITTING AND WELDING *	1978
U 7	CENTENNIAL COLLEGE LEARNI	CCDO WELDING FITTER *	1978
U 8	CENTENNIAL COLLEGE LEARNI	CCDO WELDING OPERATOR *	1978
E 9	LEAKE, KENNETH	WELDING CRAFT SCIENCE	1967
E 10	LEAKE, KENNETH	WELDING SCIENCE AND METALLURGY	1968
E 11	MASTERTON, ROBERT N.	STUDY GUIDE FOR WELDING TECHNOLOGY	1973
U 12	OATES, JOHN ARTHUR	WELDING ENGINEER'S HANDBOOK	1961

*Denotes Learning Packages

In the very near future, the Bibliocentre will be turning its attention to adding new bibliographic records immediately to DOBIS through its on-line cataloguing facility. The training of cataloguers is underway to achieve this end.

Programmes are presently being written to manipulate the data through DOBIS to provide Computer Output Microfiche catalogues in three separate sequences; author, subject, and title, as well as to provide Learning Packages details, also in COM format. It is hoped to be able to offer COM produced catalogues for all users by September 1979.

Activity is also underway to provide Circulation through LIBIS for some of our users. It is planned to have a LIBIS pilot project operating for Ryerson Polytechnical Institute in September 1979, and to extend the project to two other users by Spring 1980.

Further, in the future it is hoped to use DOBIS as a total library automated system. To further streamline the Bibliocentre operation, the order and acquisition module will be used and the existing automated batch order and acquisition system will be abandoned, thus merging the existing two automated systems into one. It is hoped to extend this facility out to the user's site, to enable the automated ordering cycle to start at the user level. An on-line facility to the database would enable a search to be made not only of the bibliographic data, but also of the items already on order. This would enable book selection criteria verification to take place through access to the entire database. The placing of an order on-line for a new item not previously on the database could be the beginning of the bibliographic data, further eliminating duplication of effort. Such order files are, of course, not available to the user on the present system resulting in much duplication of order verification at each user library. Hopefully at some future date it will be possible to turn resources towards utilizing the serials and periodicals modules as well as inter-library loan, if our users so desire.

Why are we so excited about DOBIS at Centennial College? DOBIS has made it possible to bring our entire operation in-house, resulting in measurable benefits already. We find items are being processed faster through DOBIS than ever before. This fact has to reflect favourably on service to our users. Items are not only moving faster through the system, but because of the quick search through the access point files more items are being processed by fewer staff. There is also a marked improvement in the level of operator accuracy in finding a matching record due to the almost catalogue card format of the on-line full bibliographic display screen. The security of the data has increased because of the DOBIS "layered" security system. The Bibliocentre is taking full advantage of this. On-line terminal operators have only the security level necessary to perform their specific function; i.e. Searching only has the lowest level (level 1); Catalogue/Searching with ability to add holdings information to the bibliographic record (level 2); editing data in the document file (level 3); editing entries in the Access Point File (level 4); etc. As new data is input on-line, DOBIS demands that the integrity of the data be checked to the entries already available in the access point files, thus the possibility of creating inconsistent entries diminishes. Present inconsistencies of data elements can be systematically and quickly corrected because of the pointer facility between access points and document entries. Data can be kept up-to-date as national agencies such as Library of Congress implement changes to reflect our changing environment. Punctuation can be changed to reflect ISBD changes, automatically by programme changes implemented by the system, rather than by an operator looking at data segments. The bringing of our operation in-house has given us total control over our own destiny. Development of continued automation relate to our users needs, their priorities are our priorities, not influenced by any needs other than our users and Centennial College.

The Bibliocentre already has a networking facility operating for its users throughout Ontario. DOBIS is demonstrating its potential to be a very powerful database management tool within this network environment with many capabilities which we hope and plan to use in the future. In looking back over the history of the Bibliocentre to the present day, I realize the great strides that have taken place, from a small manual technical services project born hurriedly out of necessity, to a well planned highly sophisticated DOBIS facility employing 67 people, handling 100,000 plus items a year, able to respond to the needs of its user community. We look forward with confidence to the changing demands of the future, a confidence based on the demonstrable flexibility of DOBIS.

DISCUSSION

Mr. J.E. Skipper: DOBIS lacks components for acquisition, serials control, etc. Who is responsible for future development?

Carpenter: Louvain is working on the development of acquisition functions. The other lacking components are yet to be assigned.

Dr. D. Shaw: Are the file contents in fixed or variable fields? What is your total character storage?

Carpenter: All fields in the access point files are actually variable storage, key portions can be up to a maximum of 255 characters, but fields in the bibliographic file are not fixed. Total file storage is approximately 500 million bytes for the bibliocentre database of approximately 400,000 records.

Prof. A.J. Evans: Why did you use full MARC capability? Did you really examine the need for this?

Carpenter: Yes, we considered this necessary, in view of the fact that we serve 105 users with different requirements. So we wanted a highly structured flexible system.

Evans: Are the access point files fully updated inverted files, which is presumably fairly expensive, and do you really need them all, particularly for example the publishers' file?

Carpenter: It is no more expensive than repeating data over and over again, because of inverted files, storage is saved by elimination of redundancy. Once again, we wanted full capability of carrying out any search as quickly and easily as possible. The publishers' file may, for example, be useful when ordering system is implemented.

Mr. P. Durey: Would you comment, Mrs. Carpenter, on the kind of records your clients want?

Carpenter: Yes. Enquiries have been so varied - lists of AV material, phonotapes, videotapes, subject listings, listings by LC classification. With DOBIS we can now hopefully produce these products, and are programming to this end.

Mr. G.A. Hamel: You are going to provide COM fiche for your users. What cataloguing hard copy do you provide?

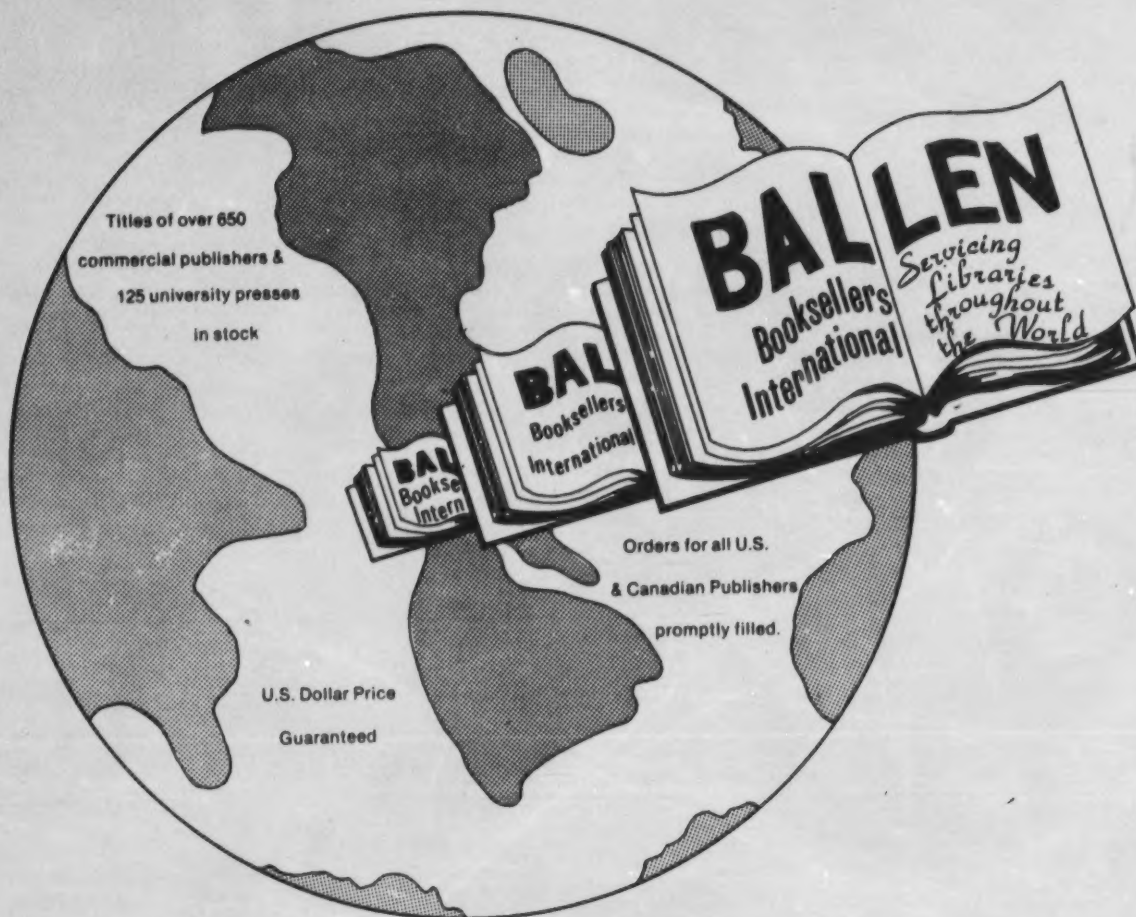
Carpenter: We produce catalogue cards. Colleges get one complete set of cards for each record (main entry, subject cards etc.) or COM catalogues three times a year. We plan to offer a COM catalogue author, subject, title in three separate sequences monthly on demand for all users if required. We will supply complete catalogues each run. We will not be providing supplements.

Mr. F. Boeckx: You chose microfiche. Did you examine other forms of physical output?

Carpenter: We gave the choice to the users, and they preferred microfiche. But as the system goes on-line, we hope to realize a real dialogue user-system. This may not be possible for all colleges, because some are a great distance from the central processing unit and therefore data transmission costs are involved.

Mr. M.J. Pees: How many staff are there in your organisation?

Carpenter: There are 67 people in the Bibliocentre and 5 systems engineers.



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NEW ASPECTS AND TRENDS IN INTERLENDING IN THE FEDERAL REPUBLIC OF GERMANY

J. Heydrich

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1. Interlending in West Germany may serve as an example of a decentralised, co-operative library system. In a relatively small geographic area Germany has a large number of towns, with the usual scientific and cultural institutions, including libraries. There are indeed a few national libraries, such as the Staatsbibliothek Presussicher Kulturbesitz in West Berlin, the Bayerische Staatsbibliothek in Munich and the Technische Informationsbibliothek in Hanover. These and some other large libraries play an important part in inter library loans, but they cannot be called the only centres for interlending in Germany. It would be more exact to say that the burden of interlending is shared by more than 500 libraries which have been accepted as interlending libraries by the education ministers of the individual states of the Federal Republic.

The interlending scene in the Federal Republic of Germany has begun to change. Matters of inter library loan, in fact, have never been of minor interest to the librarians. Few other library services attract equal attention, and this is mostly of a critical rather than appreciative nature. Anyone who has to deal with interlending matters at all knows of the complaints about difficulties that may arise when a request is made for an item not existing in a local library. This is at least a matter of discussion among librarians. Complaints on the part of the users usually relate to cases when they have to wait an unreasonably long time for the item they requested to be obtained from elsewhere. Moreover, the loan statistics show that in Germany a considerable percentage of loan forms do not return to the user at all, or return after a long time without the request being satisfied. These loan forms, being provided with a large number of official stamps, tell of the diligence of the librarians in lending departments and Union Catalogues. The user, however, is hardly interested in learning that many offices were anxious to fulfil his wishes; he is merely interested in the speedy satisfaction of his loan request.

2. In the fifties interlending in Germany had grown so fast that the few lending libraries that existed could not supply anywhere near all the books that were wanted.

Therefore, the Union Catalogues, which already existed to some extent in the lending regions, were expanded and charged with the control of interlending, according to new interlending rules that are still in force today, although we shall see the introduction of a revised version by the end of this year. At seven different places large catalogues were built up, recording not only the holdings of university libraries, but also those of special and public libraries. These Regional Union Catalogues are located as follows:

Zentralkatalog Baden-Württemberg in Stuttgart,
Bayerischer Zentralkatalog in Munich,
Berliner Gesamtkatalog in West Berlin,
Hessischer Zentralkatalog in Frankfurt-am-Main,
Niedersächsischer Zentralkatalog in Göttingen,
Norddeutscher Zentralkatalog in Hamburg,
Hochschulbibliothekszentrum/Zentralkatalog des Landes Nordrhein-Westfalen in Cologne.

By the beginning of 1979, these catalogues contained the locations of 87.6 million volumes from more than 500 libraries in the Federal Republic. The proportion of positive locations in the individual Union Catalogues varies from a bare 50 % to just over 70 %. Since that time the organisation of interlending in Germany has resulted in a fair distribution of the Union Catalogues. In addition, a number of Specialised Union Catalogues (the so-called "Fachzentralkataloge") are being established. Their listings are not included in any of the Regional Union Catalogues. Users interested in a particular subject area can apply direct to these Specialised Union Catalogues, whilst the Regional Union Catalogues pass on to them specialised requests which they have been unable to fulfil. We are referring here principally to four card catalogues which are being compiled at the Staatsbibliothek Preussischer Kulturbesitz in West Berlin:

Osteuropa-Sammelkatalog (OSK, - Eastern Europe Union Catalogue),
Zentralkatalog der Orientalia (Union Catalogue of Oriental Material),
Sammelkatalog Südostasien (South East Asia Union Catalogue),
Zentralkartei der Autographen (Union Index of Autographs).

There are three other Specialised Union Catalogues:

Standortkatalog der deutschen Presse (Locations Catalogue of the German Press), Bremen,
Zentralkatalog der Bundeswehrrbibliotheken (Union Catalogue of the Libraries of the Bundeswehr), Düsseldorf,

All the Union Catalogues are co-ordinated by the Kommission für Zentralkatalogfragen (Standing Committee on Union Catalogues) of the Deutsches Bibliotheksinstitut (DBI, - German Library Institute) in West Berlin. The chairmanship of this committee is at present held by the Hochschulbibliothekszentrum (Centre for University and College Libraries) in Cologne. The committee's task is to ensure the effective co-operation of the various Union Catalogues. The aim is to provide, as quickly as possible, comprehensive information giving at least one location for each of the very large number of book requests received. Unfortunately this aim is only partially fulfilled. About 15 % of the total number of works cannot be located. Furthermore, the tracing of each location takes a significant amount of time, particularly when more than one Union Catalogue has to be consulted.

In the meantime, the rapid development of new universities and the general expansion of scientific activities have had consequences for the supply of literature. Just as the building of new roads in Germany hardly meets the needs of the permanently growing volume of traffic, so the new interlending roads constructed at the same time are being subjected to excessive pressure by the extremely large increase in loan requests. Just as new roads seem to bring new cars, so in the sphere of inter-library lending every improvement in resources seems to bring forth a new demand. The loan statistics provide clear evidence of this. Whereas at the end of the fifties each Union Catalogue handled some ten thousand requests, in 1978 the Union Catalogues had to handle more than 2 million requests.

3. The broad pattern of interlending in Germany is further complicated by the existence of a considerable number of printed indexes. These fall into three categories:

- 3.1 National periodicals indexes.

These are compiled in the Staatsbibliothek Preussischer Kulturbesitz. Not all the periodicals catalogues in this category have so far been printed in their entirety, but it is intended to publish them all with financial help from the Deutsche Forschungsgemeinschaft,

Gesamtverzeichnis der ausländischen Zeitschriften und Serien (GAZS, - Union list of foreign periodicals and series),

Gesamtverzeichnis der deutschen Zeitschriften und Serien (GDZS, - Union list of German periodicals and series),

Gesamtverzeichnis der Zeitschriften und Serien (GZS, a continuation of GAZS and GDZS starting from 1971, Union list of periodicals and series),

Standortverzeichnis ausländischer Zeitungen und Illustrierten (SAZI, - Finding list of foreign periodicals and magazines).

3.2 The databank.

There exist in West Germany a considerable number of printed reference tools for locating periodicals and series. The result is that about 20 % of the total interlending of monographs takes place directly with the holding libraries and bypasses the Union Catalogues completely. In addition most of the Regional Union Catalogues also contain locations for all periodicals and series held by the libraries they cover. There are two reasons for this. Firstly none of the periodicals indexes mentioned is comprehensive. Even the large national lists cover only a selection of the relevant libraries, despite the fact that they aim at more or less complete coverage. The DBI started to install a German databank for journals in collaboration with the Staatsbibliothek in Berlin and some other libraries. This "DABA" is produced as computer output microfiche (COM) and is growing very quickly. DABA not only contains new periodicals but also many earlier titles. The latest edition of January 1979 has locations of 145,000 different entries. There remains one problem with DABA: until now only a proportion of the German libraries have been sending their titles to DABA. On the other hand most of the bigger libraries have a copy of the DABA-COM. So more interlending forms are received by the DABA-libraries than by those other libraries which don't send their titles to DABA. In the Union Catalogues, on the other hand, locations are given for a large number of small and medium-sized libraries and special collections, which tend to be used less heavily for interlibrary loan than the larger libraries. A further reason is that it is easier for many libraries, in view of the large volume of interlending in Germany, to direct all their interlibrary loan requests as systematically as possible to the appropriate Union Catalogue, which then undertakes the rest of the work.

3.3 Regional indexes.

Some of the states in the Federal Republic, such as Lower Saxony, Hesse, Bavaria and Baden-Württemberg, possess periodicals indexes which have already been printed or are being prepared for publication. These indexes are being compiled with the aid of data processing techniques, in collaboration with the Union Catalogues, and with partial assistance from the DBI, formerly the "Arbeitsstelle für Bibliothekstechnik" (ABT). They are used in particular for interlibrary loan requests from the respective states themselves, but can also be employed to a certain extent for requests from other federal states.

One year ago, unfortunately, a project of the DBI and the Union Catalogues came to an end. This was the GK, the "Deutscher Gesamtkatalog" (German Joint Catalogue.¹⁾ The idea was to film all the catalogue cards of the seven Regional Union Catalogues and of some old catalogues of great libraries such as the Bavarian State Library in Munich. After filming, 44 million catalogue cards were to be sorted into a single alphabetical sequence and after further filming they were to be put out on microfiche, which although not COM would be similar in form. The cost of this project was estimated at about 40 million Deutsche Marks. Such a large amount of money could not be found. Now the DFG is discussing the possibility of giving the Union Catalogues separate grants of money to reproduce their catalogue cards on microfiche. They have started with a section of the Hesse Union Catalogue in Frankfurt containing 760,000 entries on 402 microfiches and consisting of literature from 1960-1973. Other regional indexes on microfiche should follow.

The Union Catalogues of Hesse and of Northrhine-Westphalia were started some years ago with the co-operation of the Hochschulbibliothekszentrum (HBZ) in Cologne and the Kommunales Gebietsrechenzentrum (GKRZ) Frankfurt, two ISBN Registers for use within their regions. In the latest version of their COM catalogues the two ISBN Registers contain more than 200,000 locations of new literature produced since 1974 in Hesse and Northrhine-Westphalia.²⁾

3.4 Local periodicals indexes.

In a few towns in West Germany, a number of university and college libraries have collaborated with other libraries in the locality to draw up local periodicals indexes. Some of these indexes contain all known locations, and so include periodicals held in institutes which are not normally accessible to the general public. These local lists are used to a limited extent only for external lending purposes. They serve principally to facilitate the supply of literature within the locality, and to assist bibliographical research.

3.5 Data Processing.

It was pointed out above that in some interlending regions there exist or are being compiled pools of records which have been produced by data processing and which are being used for direct requests for literature among the libraries of the region. The HBZ in Cologne is installing a computer catalogue of the acquisitions and holdings of the libraries of five new universities, called "Gesamthochschul-Bibliotheken", the "Fernuniversität" in Hagen, the "Zentralbibliothek der Medizin" in Cologne and two smaller libraries. This combined COM catalogue is used for acquisition and for interlending. A similar computer catalogue was established in Bavaria to facilitate interlending among some libraries there. In

Hesse and Lower Saxony similar projects are being started. An attempt is being made to combine these data bases into a unified German Computer Catalogue, the so-called "Verbundkatalog" 1).

3.6 Participation in international networks.

I should also like to mention the installation of some terminals in German libraries in order to make use of international information networks such as DIMDI, etc. These services do not relate specifically to interlending matters but nevertheless have some bearing on them. The use of the terminals is generally very expensive. Therefore the German Federal Administration gives grants to support the use of terminals. In this respect an important role is played by the "Fachinformationszentren" (FIZ), which are new establishments in the Federal Republic of Germany, some of them formed by co-operation or in combination with existing libraries.

4. In addition to what has already been said, I should now like to say a few words about a small number of libraries called "Zentrale Fachbibliotheken" (Central Specialist Libraries) which play an important part in regional and national interlending in their own particular subject. They are:

Technische Informationsbibliothek
(Library of Technical Information), Hanover

Zentralbibliothek der Wirtschaftswissenschaften
(Central Library of Economics), Kiel

Zentralbibliothek der Medizin
(Central Medical Library), Cologne,

Zentralbibliothek der Landbauwissenschaft
(Central Library for Agricultural Science), Bonn.

These Zentrale Fachbibliotheken collect the literature of their own fields comprehensively, and this includes, in particular, publications which are notoriously difficult to come by, such as conference proceedings, reports, material issued by commercial firms, etc. Whilst general inter-library lending in Germany is done by means of free application forms, special loan forms for these libraries may be purchased and a request made direct to the libraries listed. Heavy use is made of this facility, in particular, by many firms at home and abroad. The monograph and periodicals holdings of these central libraries are, however, listed in full in the appropriate Regional Union Catalogue, so that they are also accessible through the normal interlending channels.

5. Mention must also be made of the so-called "Sondersammelgebiets-Programm" (Special Subject Collection Programme) of the Deutsche Forschungsgemeinschaft (DFG). For many years the DGF has been providing university libraries with special funds for the acquisition of foreign literature in particular subject areas. This 'SSG-Programm' covers all the main fields of knowledge, and is modified at regular intervals to match changing conditions in research and teaching.³⁾ It is organised in a similar way to the American 'Farmington Plan'. The purpose of this program is to ensure - particularly in view of constantly rising book prices - that a copy of every important scholarly work produced abroad is available in at least one generally accessible research library. The SSG holdings are all recorded in the Regional Union Catalogues. It is possible, however, for a library to rely on a knowledge of the SSG plan and to send its request direct to the SSG library specialising in a particular subject area, if it is sure that the work required is not available in its own region. In other cases the Regional Catalogue, when it fails to locate a work, will itself pass on the request to the SSG library.
6. I have waited till now to mention deposit copies, because the law of legal deposit in West Germany has not been particularly effective. The Deutsche Bibliothek in Frankfurt receives a copy of any new publications for its reference collection (but usually not for lending). Apart from this, the individual states have variously framed laws of legal deposit, dating mostly from the early years of the 19th century. One is bound to say that the German law of legal deposit is fragmented, and is really only significant in interlibrary lending when historical literature of a regional or local character is requested. The various copyright libraries are required to report such holdings to the relevant Regional Union Catalogue, although this sometimes takes the form of a short-title entry only.
7. It is clear from what has been said so far that the German library scene is extraordinarily complex when it comes to the provision of literature at regional and national levels. Depending on its knowledge of the possibilities, an individual library may request a book or periodical article which it does not itself possess by way of the appropriate Regional Union Catalogue. The statistics show that this is very often the case. It may also, however - if appropriate - apply to a Specialised Union Catalogue, a Central Specialist Library, one of the big national libraries, an 'SSG library' or a library holding deposit copies. An abundance of possibilities which it is not easy for the outsider to penetrate!

It is hardly surprising that demands have come from librarians for the simplification of the German interlibrary loan system. Such attempts have so far been unsuccessful. For myself I am sceptical about them, since the extent of interlending in Germany and the very varied functions it has to fulfil demand equally varied solutions.

A draft of new interlending rules (the so-called "Leihverkehrsordnung", LVO), compiled in co-operation with union catalogue experts and now nearing completion will introduce modifications to the LVO from 1966⁴⁾ which is now in force. This draft⁵⁾ is to be issued as an instruction this year in the individual states of the Federal Republic.

One could say that users who complain about the German inter-library lending system are unimportant from a statistical point of view, for every day thousands of loans are speedily processed, whereas only a few cause difficulties. One should, however, start from the fact that behind every request is the just claim of a user.

Leaving aside the isolated cases, we are obliged to state that interlending in the Federal Republic of Germany is altogether slower and more ponderous than, for example, interlibrary lending in Great Britain, where it is centralised by the British Library Lending Division. For the present we have to accept the fact that a comparable central lending institution for Germany cannot be expected. What matters is to make the most intensive and efficient use of the existing resources. From the point of view of the Union Catalogues there is little promise in levelling the richly structured landscape of interlending in the hope of finding an ingenious solution. The experiences of the last thirty years show that with an increasing volume of interlending an integrated network must be created in order to satisfy the demand.

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- 4) Der Leihverkehr in der Bundesrepublik Deutschland. Die Leihverkehrsordnung von
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DISCUSSION

Mrs. E. Törnudd: What is the volume of interlibrary lending in the BRD?

Heydrich: More than 2 million per year.

Dr. N. Fjällbrant: What is the speed of the interlibrary lending process?

Heydrich: If there is immediate satisfaction from the first library - the time is about 10 days. If the request has to be passed on to another library, it could take 3 to 4 weeks.

Mr. S. Westberg: Is there a conflict for the university libraries between the needs of their local users and external interlibrary users?

Heydrich: Yes, SSGP (Sonder-Sammel-Gebiets-Programm) has dealt with this.

Westberg: Is the service free of charge?

Heydrich: Yes, it is.

Prof. M. Slajpah: I would like to report that at the Central Technical Library of the Edvard Kardelj University, Ljubljana, we are very pleased with the good interlibrary service given by the Technische Informationsbibliothek, TIB, Hannover. I think that the central specialist libraries are a great benefit for interlibrary lending.

Mr. G.A. Hamel: On page 1 of your paper you say that 500 libraries have been accepted as interlending libraries by the Ministry of Education. What does this mean? Do these libraries receive extra funds for their participation in the system.

Heydrich: These 500 libraries are allowed to borrow, but they must be prepared to lend in order to qualify.

Fjällbrant: What is the satisfaction rate for loans from the first library?

Heydrich: It varies greatly from region to region, from 65 % to about 50 %.

Mr. M. Hopkins: You said that it would cost about 40 million DM to create the GK. Do you have any idea as to how much money is being spent at the moment on the existing union catalogues?

Heydrich: About 22 to 24 million DM per year.

Mr. F. Boeckx: Have you adopted the new German catalogue rules (RAK) in the different union catalogues?

Heydrich: We discussed this and decided that it would be difficult to change from the PI (Preussische Instruktionen) to RAK without automation of the union catalogues.

THE SWEDISH LIBRIS SYSTEM

Lennart Gärdvall

Head of the LIBRIS-secretariat, Royal Library,
Stockholm, Sweden

1. Introduction

Data processing has been used in Sweden since the mid-1960's for library and information retrieval purposes, among which the LIBRIS project (library routines), MIC, IDC and others (information retrieval), and SCANNET (data communication) are worth mentioning.

LIBRIS (LIBRARY Information System) has been designed as a computer-based data communication and processing system for the Swedish research library community. The main emphasis has been laid on the integration of routines within and between the research libraries. It is strictly intended for bibliographic data processing with a certain interface to the handling of printed material in libraries. It has primarily been developed to meet the needs of the Swedish research libraries. Since the beginning of this decade development work has been carried out on LIBRIS by the Swedish Agency for Administrative Development SAFAD (Statskontoret) - a government agency - in close co-operation with the Swedish research libraries as represented by the Swedish Council of Research Libraries (Forskningsbiblioteksrådet, FBR).

The initial trial run with LIBRIS - which started in the spring of 1972 at Linköping University Library after a period of system development since 1970 - comprised routines for search, cataloging and catalog production. In the sequel, by government decision, the project has been entirely concentrated to these functions.

In 1976 fourteen research libraries were linked to LIBRIS and no expansion is planned until April 1980 when another seven will be connected, excluding those using the dial-up facilities.

A fundamental idea in the LIBRIS project has been to combine the production of different catalog items with routine bibliographic input from the research libraries. The bibliographic input into LIBRIS is immediately accessible in a real-time environment for on-line retrieval at all libraries in the communications network.

Cataloging of a publication is done at the LIBRIS library which first acquires the publication ("primary" cataloging). A main principle is that this cataloging should be used by other libraries acquiring the same publication ("secondary" cataloging).

2. Computer system

The development of LIBRIS in the early seventies was done in cooperation with SAAB who was developing large computer hardware and software. As a result, LIBRIS is at present running on a SAAB D223 computer.

The computer system is briefly described in table 1.

Table 1. LIBRIS II Computer System Hardware and Software.

Hardware

- SAAB D223, 336 Kb core main frame
- 3 9-track tape stations
- 8 85-Mb discdrives
- SAAB D5/30, 48 kb core front-end

Software

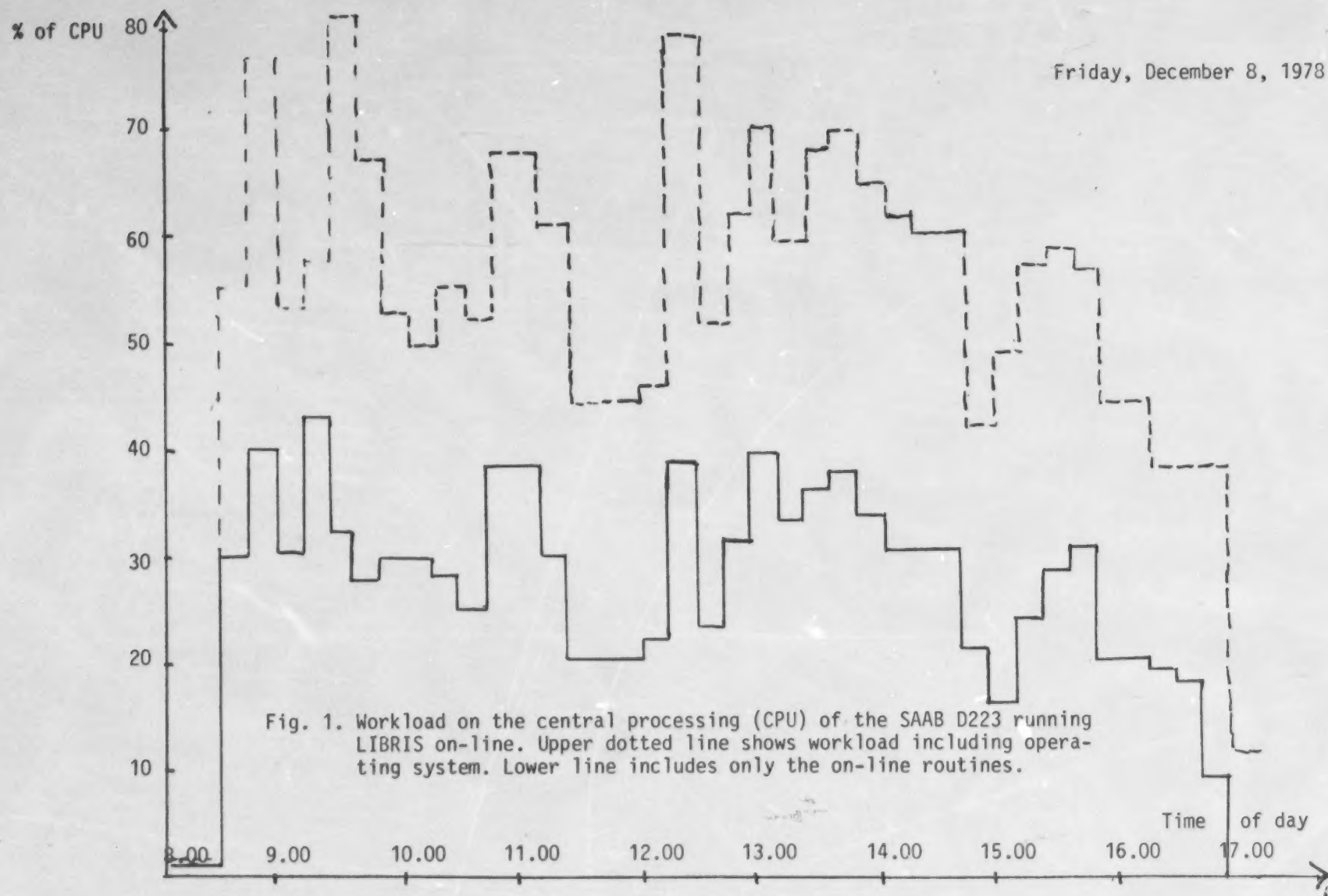
- operating system OS23
- COBOL, 50 on-line routines
- COBOL, 60 batch routines
- terminal controller
- job controller
- data communication routines

The capacity of the present computer system, which is used only for the LIBRIS routines is very limited. Very few terminals could be added to the system. The day-time workload is now such that the average response time (9 sec.) is too high at peak hours. Figure 1 presents the on-line workload in percent of the total CPU capacity and shows how it fluctuates on a busy Friday. The effects of coffee-breaks, lunch hours and time of day is clearly shown. But even though the computer is old and slow the LIBRIS system has been used more and more by the terminal operators during the last year, bearing in mind that the number of terminals is still the same 25. The on-line system activity April 1979 presented in table 2 gives us a few clues to explain this fact.

Table 2. System activity April 1979

Catalog records input at terminal	3584
Order of catalogcard sets	8900
On-line hours scheduled	160
Percent time available during scheduled hours on central computer	99,7
Terminals	25
Total numbers of bibliographic re- records in the database	391021

Table 2 indicates that very few hours have been lost as a result of hardware or software failure during this particular month. The picture has been very much the same almost a year. The high up-time on the central computer has created productive working conditions for the terminal operators. These stable conditions are partly a result of good library control of the central computer and partly a result of few but coordinated changes in the system software. The awareness of system availability has also been positively improved among the terminal operators with the introduction of such features as an answering service with information on system breakdown time and a high-pitched sound from terminals at system start-up. This improved awareness has in turn led to more effective use of the terminals and the data base.



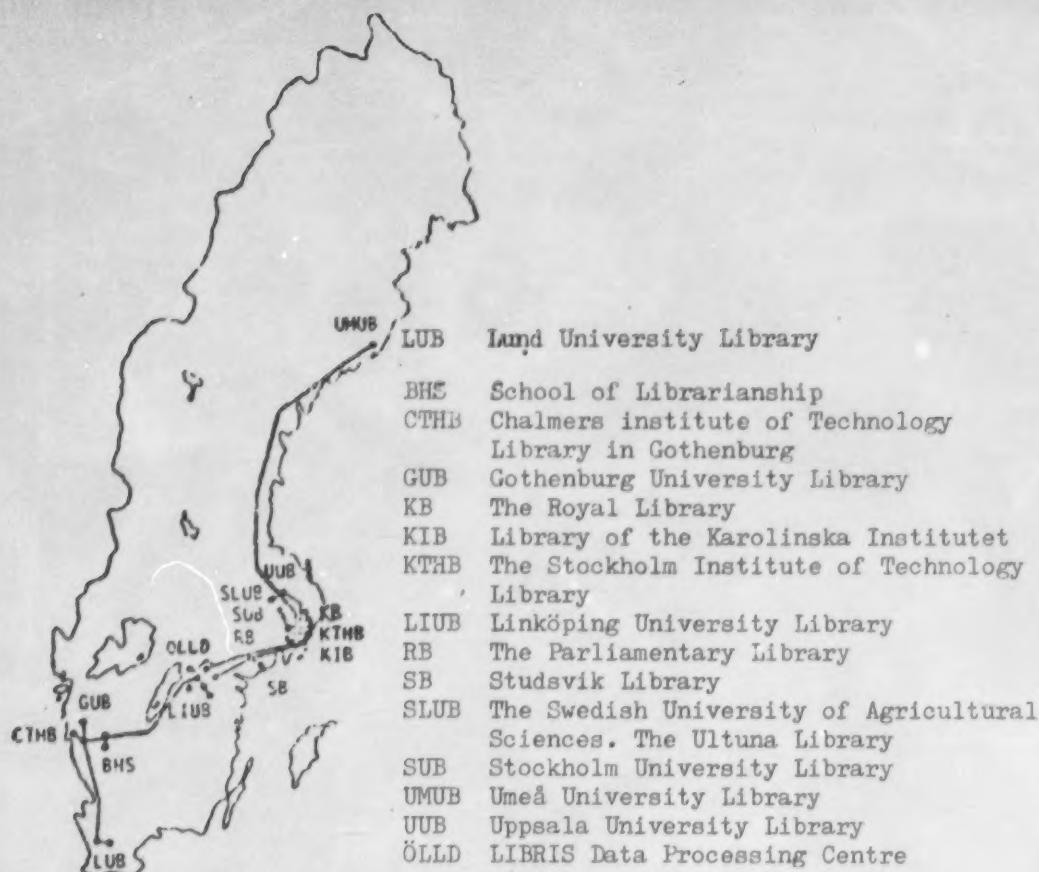


Fig. 2 LIBRIS data communication network

3. Data communication system and terminals

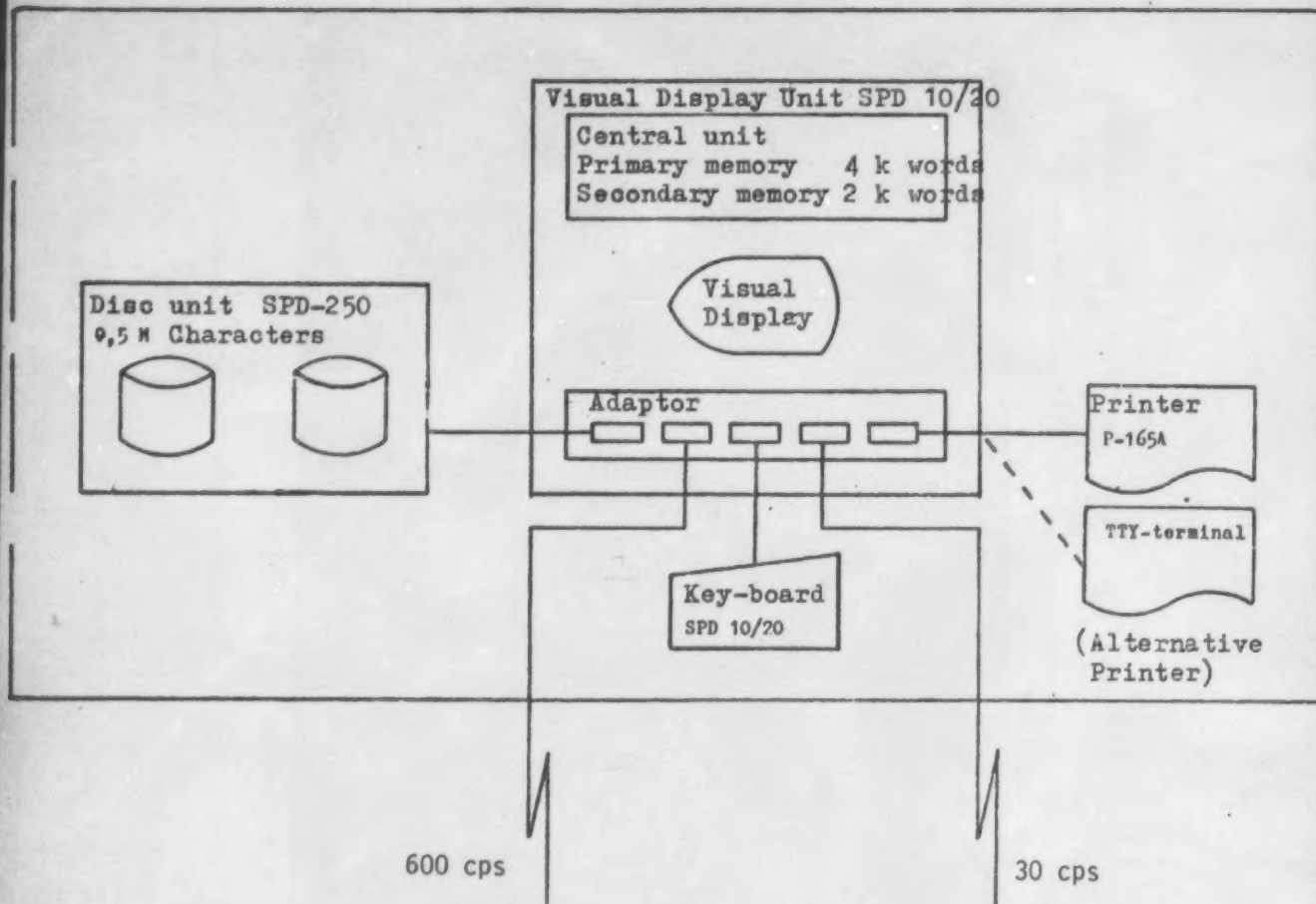
Figure 2 shows the LIBRIS data communication network which consists of three leased four-thread telephone lines, twenty 4800 bps modems and a SAAB D5/30 front-end computer which is responsible for polling the terminals and the opening and closing of the network and terminals. Transmission method in the network is binary synchron (BSC).

Today, 25 terminals (Incoterm SPD 10/20) are connected to the LIBRIS real-time routine through the data communication network. Figure 3 shows the configuration of a LIBRIS terminal. The LIBRIS terminal can be described as a mini-computer with a visual display unit containing a central unit with a primary and secondary memory, a display unit, a communications adaptor and a key-board, linked to a floppy-disc unit and a printer. The terminal is character oriented and is programmed in an assembler language with about sixty instructions.

The key-board contains 48 alphanumeric keys, keys for editing purposes and keys for calling special LIBRIS functions. With the aid of character combinations, the LIBRIS character set can be very much extended. LIBRIS can store and also correctly represent up to 335 different character in various alphabets, diacritical marks etc. through the special matrix printer that is supported by the LIBRIS terminal. The LIBRIS terminal can also be used as a dial-up port for teletypecompatible terminals. This function is supported by a special software that is loaded in the LIBRIS terminal which permits the teletype to use the LIBRIS search routines but not the cataloging routines.

Fig. 3. LIBRIS terminals

25 Terminals



This dial-up function is used by libraries outside the family of LIBRIS-libraries and may well be a model also in the next version of LIBRIS going into production next year considering the possibilities to cut down on data communication costs compared with direct dial-up to the central computer.

Another way to offer dial-up facilities to LIBRIS is to connect LIBRIS to packet - switching networks such as SCANNET, but it is not yet clear if the pricing policy of such a network will be the right one for long-distance dial-up connections compared with dialing up of nearby LIBRIS port when the next version of LIBRIS goes into production next year in April on another computer.

4. Library functions supported by LIBRIS

Why LIBRIS was designated as a network system is partially explained by the need for decentralized reporting of library accessions to the union catalog covering accessions of foreign literature in Swedish research libraries (AKB), and for an efficient local use of a centralized cataloging of Swedish literature.

Since 1886 and until the advent of LIBRIS every research library in Sweden cataloged its own foreign acquisitions and also forwarded bibliographical data to the Royal Library (Kungliga biblioteket) where, at the Bibliographical Institute, the union catalogs have been edited. This means that the same item could very well be cataloged several times, by different libraries and this was of course felt as a waste of labour. One of the corner-stones of LIBRIS was therefore to reduce the amount of time spent on cataloging of foreign material. Thus, the library in the LIBRIS network that catalogs a certain publication first is supposed to record the relevant information in the data base. This is so-called "primary" cataloging. Those libraries that subsequently acquire the same book only have to add local classification codes, shelf numbers etc. to the record already established. This has been designated as "secondary" cataloging. Since many research libraries in Sweden lack terminals, reporting by conventional cards to the editorial staff of the union catalog is still considerable. Those holding reports are submitted to the data base by an off-line updating procedure. The number of reported holdings per bibliographic record in LIBRIS is shown in table 3.

Table 3. Number of reported holdings per bibliographic record in the LIBRIS data base April 1979.

Number of holdings per bibliographic record	1	2	3	4	5	6 -
Percentage of all bibliographical records	60	17	8	6	3	3

The number of holdings per record will probably increase rapidly when the updating capacity goes up to 150 terminals in April 1980, with the change-over to a more powerful IBM 3033.

All participating libraries order catalog cards from LIBRIS. The cards are produced by Bibliotekstjänst, a special agency to Swedish public libraries. The full cataloging of Swedish material is normally done at the Bibliographical Institute of the Royal Library which receives copies from the publishers due to a voluntary agreement and copies from the printers as legal deposit. Any library that wishes, is entitled to establish a record for a Swedish publication in LIBRIS on a lower cataloging level. Any deficient record will then be completed by the Institute to a higher level - the national bibliographical level.

Sweden has subscribed to the aims outlined by Unesco in its Unisist program and also to the program for Universal Bibliographical Control (UBC) which is

promoted by Unesco in co-operation with the International Federation of Library Associations (IFLA). The idea of the UBC program is that every country supplies its own national bibliography to other countries. During 1978 Sweden was able to supply its national bibliography Svensk bokförteckning on magnetic tape - SWEMARC-tapes. From August 1978 the weekly printed issues of Svensk bokförteckning are produced with the aid of SWEMARC-tapes and the same technique is used for the semimonthly issues and the annual volume. To facilitate the worldwide exchange of bibliographic information, LIBRIS has been made compatible with international standards to the highest possible degree. The present format LIBRIS II closely follows the UKMARC format and the SWEMARC-tapes comply with ISO 2709. The new cataloging rules for Swedish libraries that were published in the spring of 1974 are modeled on the Anglo-American Rules, British Text of 1967 (AACR/BT) and the International Standard Bibliographic Description for Monographic Publications and Serials (ISBD/M and ISBD/S) of 1974. The Swedish cataloging rules will however in the near future be subject to revision, as the corresponding foreign rules are revised.

All bibliographic records in the LIBRIS data base can be searched and updated in real-time. Searching the data base on-line is done by ISBN, author, corporate author, title or a combination of author and title. The bibliographic records are searched either for cataloging purposes or with the intent to locate a certain known item among the holdings information in the data base. The records are either accessed directly in the central object file if an ISBN is entered on the terminal, or through a central reference file using a special search key containing six characters, if a title and/or an author is entered.

The LIBRIS routines are summarized in figure 4.

5. Present organization for operation and development of LIBRIS

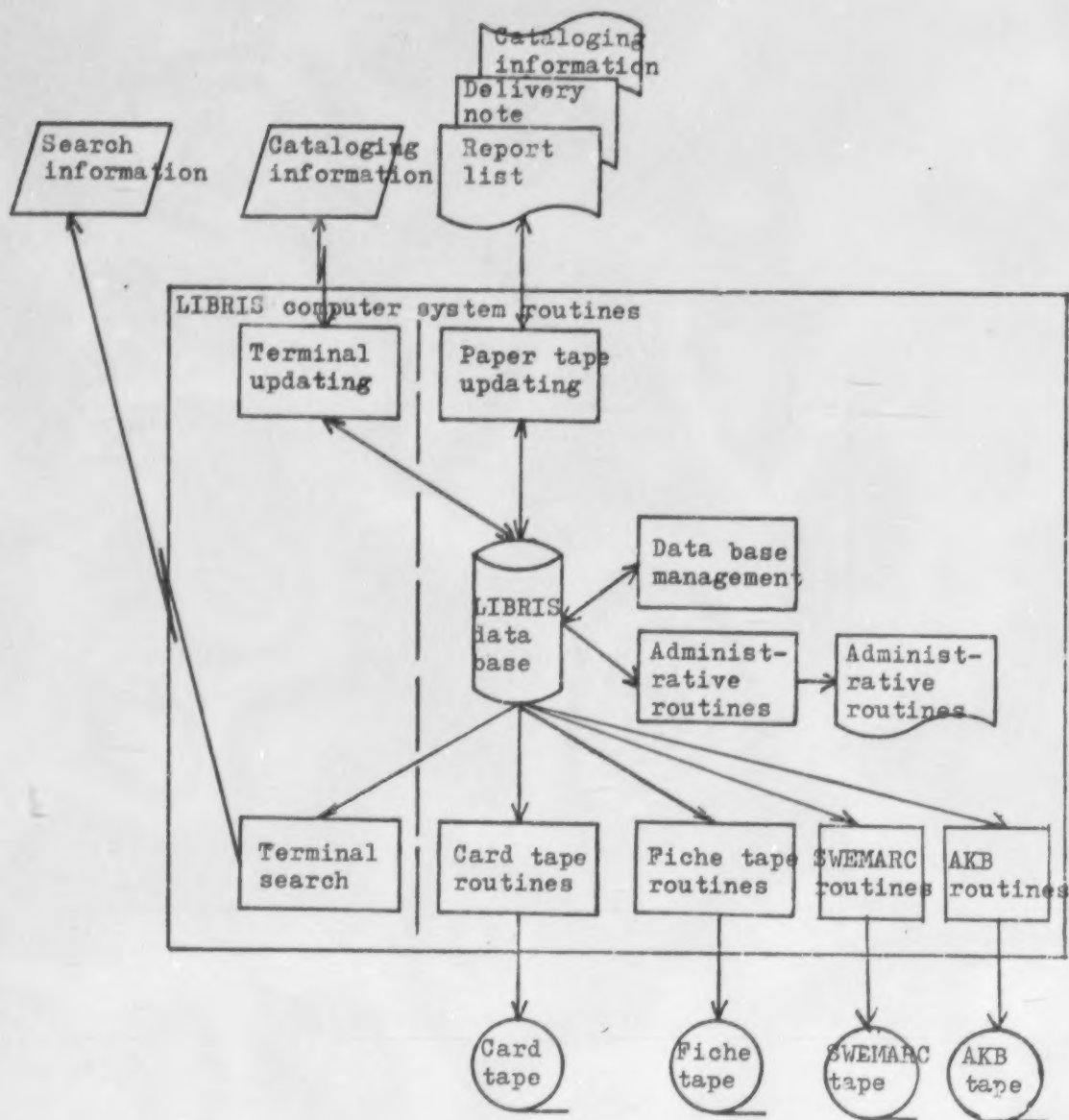
Since January 1, 1978 the Royal Library carries the responsibility for the management, operation and maintenance of LIBRIS. A special section, the LIBRIS secretariat, has been created within the Bibliographical Institute of the Royal Library to meet with the new responsibility. The development of LIBRIS is a task for the Swedish Agency for Administrative Development, the government agency which has been involved in LIBRIS ever since the beginning. Other institutions including the Royal Library, The Swedish Council of Research Libraries and the National Swedish Board of Universities and Colleges (Universitets och högskoleämbetet) as well as certain trade unions are also represented in the steering group for LIBRIS. As a channel for user influence on LIBRIS, a reference group has also been formed. The participating libraries are entitled to appoint one member for every terminal. These people are responsible for day-to-day contacts between the libraries and the LIBRIS secretariat.

6. On-going development work

At present LIBRIS is operated by Saab Univac service bureau. The SAAB D223-computer will be out of use in a few years. In consequence a project for the change-over of LIBRIS to a new computer was started in January 1978. The project work is divided into three sub-projects: The change-over to the new system (LIBRIS III), supplementary work on the present system (LIBRIS II) and the union catalog sub-project.

In a memorandum to the Government (Statskontoret, LIBRIS systemomläggning, PM 1978-10-19), the change-over project gives an account of the now ended investigation work and the plan for the construction and implementation of LIBRIS III. The memorandum sums up the principal decisions concerning the change-over made by the steering group for LIBRIS. The change-over to a new computer will be based on the current functional requirements with a revised system design

Fig. 4. Library routines supported by LIBRIS



and new programs. LIBRIS III will correspond to LIBRIS II with technical improvements. A specification of user requirements was decided upon in October after having been referred for comments to the reference group for LIBRIS and the trade unions. The change-over will take place in April 1, 1980 and a service bureau will be responsible for LIBRIS during the first years. Libraries outside the research library community will have access to LIBRIS by dial-up connections. In the middle of the 1980s LIBRIS will include a complete printed materials processing system.

In August 1978 the steering group for LIBRIS decided that LIBRIS III fr April 1, 1980 will be operated by the governmental DAFA service bureau on an IBM 3033 computer. A contract between the Swedish Agency for Administrative Development and DAFA service bureau was closed in October.

The investigation work on the change-over is now ended and construction of LIBRIS III has started. The change-over project has been reorganized into three groups for construction, organization and purchase. In the construction group the Swedish Agency for Administrative Development has contracted Statskonsult AB for the overall responsibility as well as the responsibility for register transferral while DAFA service bureau is responsible for the technical functions.

At the purchase of terminals for LIBRIS III the goal is that all library staff in need of terminals for their work shall have access to a terminal. A specification of requirements for terminal equipment in LIBRIS III was decided upon in November. According to this specification, libraries connected to LIBRIS will have terminals able to register special characters. Libraries not connected to LIBRIS will be able to use terminals for dial-up access to LIBRIS in order to make searches and order catalog cards from LIBRIS.

The sub-project concerning supplementary work on LIBRIS II has during the last autumn introduced certain changes in the LIBRIS II system. The reference - group for LIBRIS has high-lighted various problems in LIBRIS and has come to an agreement regarding the most urgent questions. Certain improvements in LIBRIS was introduced in November.

The union-catalog project will be completed in a few months. The first volume of AKB-bok (a photocomposed three-year cumulation of the union catalog) will be issued during the autumn of 1979. This volume will cover accessions during the period 1971 - 73. The general policy, in short, will be to publish printed volumes for every three-year period. For current information on newly acquired books, microfiches are published every other month and then cumulated successively until the end of the year. These microfiches are then superseded by the printed three-year volume.

7. Further development

In March this year a Government bill on information provision was presented to the Swedish Parliament. Problems relating to LIBRIS are discussed in this bill and a number of proposals are made which are based on a report submitted by the Swedish Government commissions in 1977. According to this bill the new National Library (the Royal Library, 'Kungl biblioteket', which will be reorganized as of July 1, 1979) is to carry the responsibility for the operation and maintenance of LIBRIS. As for the further development of the system, which is now the responsibility of the Swedish Agency for Administrative Development, a new body to be created, the Delegation for Information Provision, will take over these responsibilities as of the same date, July 1, 1979. In this context it might be mentioned that the Swedish Council of Research Libraries and SINFODOK (The National Council for Scientific Information and documentation) will cease to exist when the National Library and the Delegation start to

function as new agencies. In November 1978 a resolution on this Government bill was passed by the Swedish Parliament in accordance with the general outlines of the bill.

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DISCUSSION

Dr. N. Fjällbrant: At Chalmers Library we have found that we can save on some 20-25 % of our cataloguing. However, about 80 % of our material still has to have primary cataloguing. As we now have to catalogue at a higher level, we do not achieve any saving in cataloguing time at present. Access to MARC records would probably result in a further 10-15 % saving in primary cataloguing. We use LIBRIS for searching through the holdings of other libraries, in connection with interlibrary lending.

Mr. C.G. Wood: What happened to the concept of the totally integrated library system?

Gärdvall: Development has been slow due to lack of funds.

Mr. J.E. Skipper: I assume that access to MARC in LIBRIS III will substantially increase the amount of copy (secondary) cataloguing. Is there any provision for quality control of the contributed catalogue posts?

Gärdvall: No!

Fjällbrant: The libraries carry out an unofficial control of each other's entries, resulting in comments of varying degrees of politeness.

Prof. A.J. Evans: There have been some discussions within the BLAISE/MARC system regarding the use of two levels of entry, the primary one of these being the fully acceptable one (i.e. at national level) and the secondary one put in by other users of the system, which is capable of being upgraded to a full entry.

Dr. D. Shaw: Have you a sufficiently large database to justify the expensive software support needed for an IDMS system?

Gärdvall: We would have liked ADABAS but had to be content with IMS. Now we have more money.

Mr. V. Jarc: How much money have you invested in LIBRIS so far, and how much did it cost in the last year?

Gärdvall: \$5 million and \$0.5 million.

Skipper: How many terminals can be accommodated by LIBRIS III?

Gärdvall: 150.

Skipper: Do you plan to link the LIBRIS database to others.

Gärdvall: Yes.

Dr. R. Kriek: I should like to know how much time is saved per record using this system as compared with manual cataloguing?

Gärdvall: I don't know. It is very dependent on the volume of the system.

Mr. M. Hopkins: Is there any central pressure placed upon libraries to join LIBRIS, or is participation voluntary.

Gärdvall: There is no formal pressure, but there is indirect pressure in that it is unlikely that libraries will receive financial support for joining other systems or establishing their own.

Shaw: Who pays for the system?

Gärdvall: The Royal Library. Participating libraries have to buy their catalogue cards, but we pay for the terminals and on-line communications.

101 Doelenstraat DELFT (The Netherlands)
Press release

WORLD TRANSINDEX

The International Translations Centre in Delft, The Netherlands, the Directorate General for Scientific and Technical Information Management of the Commission of the European Communities in Luxembourg, and the Scientific and Technical Documentation Centre of the Centre National de la Recherche Scientifique in Paris, France, are now jointly spotting scientific and technical translations and as of January 1978 their former publications

- World Index of Scientific Translations and List of Translations Notified to the International Translations Centre;
- Transatom Bulletin;
- Bulletin des Traductions

have been merged into one common monthly publication entitled WORLD TRANSINDEX.

WORLD TRANSINDEX announces about 32.000 translations per year, from Asiatic and East European languages into Western languages. Translations from Western languages into French are also announced; this is the beginning of an extension of the service to all "inter-Western" translations. WORLD TRANSINDEX covers all scientific and technical fields, and the translations are arranged according to subject headings derived from the COSATI system. It includes a Source and an Author Index which are quarterly and annually cumulated.

WORLD TRANSINDEX is produced by means of the PASCAL system developed by the Centre National de la Recherche Scientifique. Thus the announced information on translations is at the same time stored in a central data base which permits also the production of profile print-outs and will, later on, be available for on-line access. A microfiche edition of WORLD TRANSINDEX is also being considered.

The main objective of this cooperation is to improve the dissemination of scientific and technological information published originally in a language which the user does not understand.

The subscription price for 1978 is Dfls. 650.--.

Address for subscriptions:

International Translations Centre,
101 Doelenstraat,
DELFT.
The Netherlands.

Delft, January 1978
F43/F22/vB/MR

THE PICA CATALOGUE SYSTEM

L. Costers

Project Manager PICA

Introduction

In 1969 a cooperation was formed by the Royal Library and a number of University Libraries which was sponsored by the Dutch Government.

The goal of the cooperation was to study the possibilities of an automated, on-line catalogue system and the application of other computerized library procedures in academic libraries. The first project was called PICA.

During a relatively long period of research, an advanced format was developed for the storage of bibliographic information; the PICA format.

When in 1975 the research period was concluded it was decided to start the development of a computerized catalogue system on mini-computer hardware using a step-by-step approach.

The PICA project

One of the first steps to be taken was the development of a limited cataloguing function with the following objectives:

- Increase the cataloguing efficiency by using machine readable title descriptions from national bibliographies
- Obtain machine readable "own" title descriptions
- Construction of a Computerized Central Catalogue for the participating libraries by adding book numbers to the descriptions.

The computer system

First the necessary computer hardware was selected. A configuration consisting of two PDP 11/70 computers (fig. 1), both connected to a large disc storage memory with a capacity of at this moment 1,2 million titles was selected. The computer system is partially duplicated because of reliability reasons; if one central processor fails the database as well as the communication processors which manage the terminal network are switched to the other central processor. This way a virtually continuous service to the participating libraries is secured.

A rather important hardware facility is the terminal station used. This station consists of a HP display terminal with an optional character or matrix printer.

The display has a 256 InterMarc compatible character set and can operate with a speed of 4800 bps while more than one terminal may be connected to the same telephone line, thus greatly reducing line rental costs.

PICA Computer System

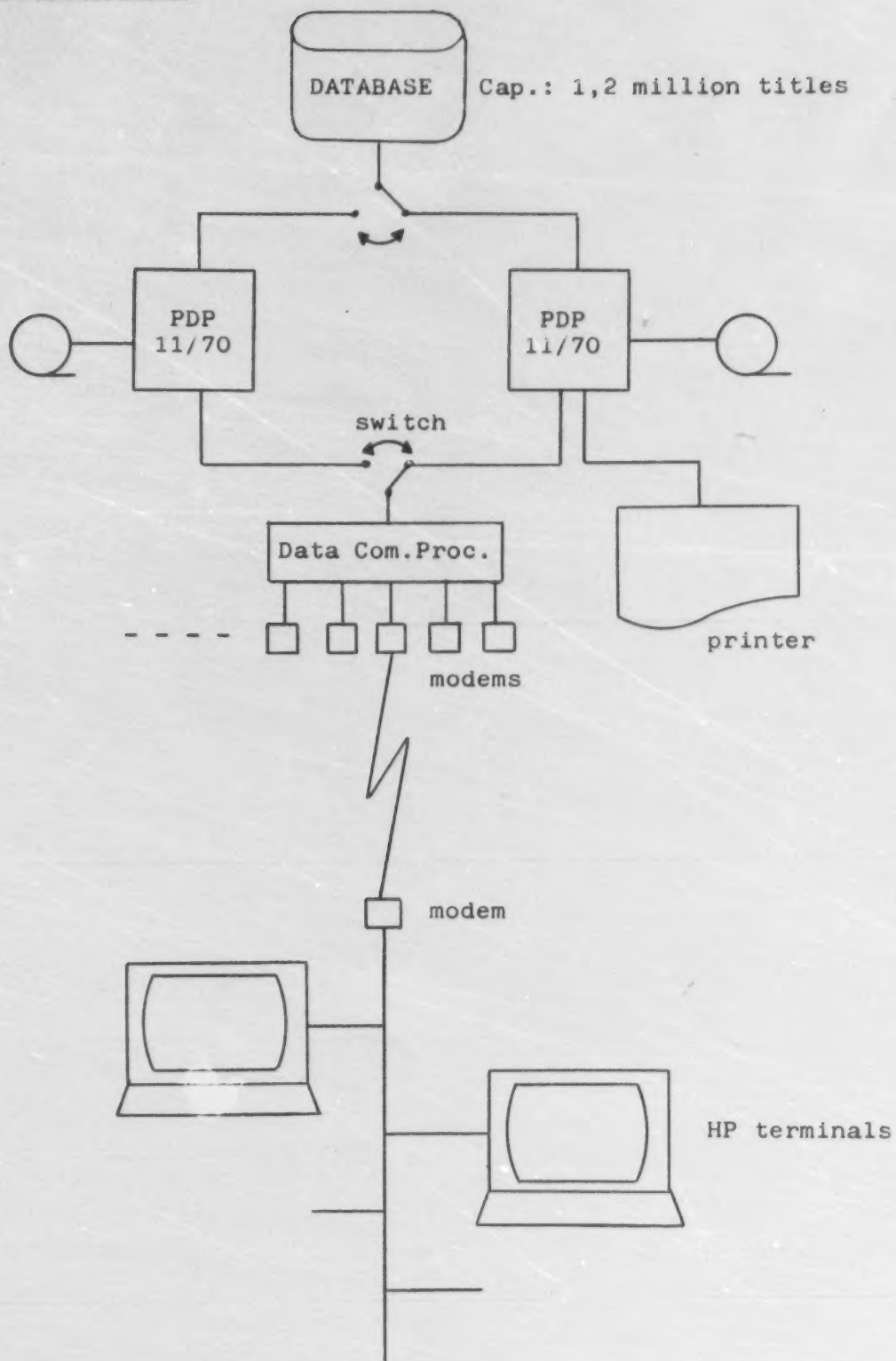


Fig. 1.

PICA functions

The services of the PICA system to the libraries consist of a number of on-line and off-line functions.

The on-line functions comprise the following:

- Search with a given key for a title in the Database
- Display the bibliographic description in a selected format
- Change selected parts of a title description or add bibliographic information to the database
- Add a book number for each copy
- Put a title in the card-productionfile in an, own, selected lay-out for card output in accordance with existing card catalogues
- Add a new title description to the database.

The off-line functions are especially concentrated on the production of flexible output and on the expansion of the database with title descriptions. On request output can be produced on the basis of user specified selection-, sorting- and lay-out-criteria. This output cannot only be produced on paper but also on microfiche and magnetic tape while on request it is also possible to have Digiset output.

At this moment the PICA database includes about 700,000 to 800,000 title descriptions, most of which are obtained from OCLC magnetic tapes.

In addition BNB and Library of Congress tapes are being processed and new information is stored in the PICA database. With a further expansion of the database with tapes of other National Bibliographies it is foreseen that the hit percentage for finding titles during the cataloguing process will go up till over 90%.

A new function, catalogue conversion, which has not yet been implemented but which will be available this fall is a combined on-line/off-line function for retrospective input of title descriptions. In this function it will be possible to capture abbreviated title descriptions on cassette tape and store them via an on-line connection into a retrofile in the PICA system.

Each night an off-line function will match the input in the retrofile with the PICA database and add relevant information to the retrofile.

This information which consist mainly of found titles can be inspected on-line and after authorization by the producing library be included in the PICA database.

In this way it is possible to include a large amount of retro titles into the PICA database in a relatively short period of time.

Future PICA functions

In addition to the functions which have been realized or are being realized a number of other functions are planned.

These are:

- On-line thesaurus facilities
- Inter library loan facilities
- Statistics

- Interfacing with local library systems
- Acquisition administration
- Extended searching facilities.

Also the development of a standard local library system is foreseen which can be interfaced to the central PICA catalogue system and which will be used by a number of libraries participating in this project.

The local system will mainly comprise the following functions and will be developed on compatible computer hardware:

- Interface with the central PICA systems
- Acquisition administration
- Serials administration
- Binding administration
- Storage administration
- Circulation control
- Statistics.

One of the reasons why an Acquisition Administration function is foreseen in both central and local systems is that this will make it possible to give local systems a relatively fast start. At first an acquisition administration can be used via the central system and later on after installation of a local system it is possible to switch to the local compatible acquisition administration function.

An important aspect is that local systems can extract bibliographic information on the own book holdings from the central database for further processing. The central database however will remain the master database and the local database the slave.

In the end it is foreseen that an information-network will be realized in which central and local systems will communicate either on-line via direct telephone connections or off-line via magnetic tape (fig. 2).

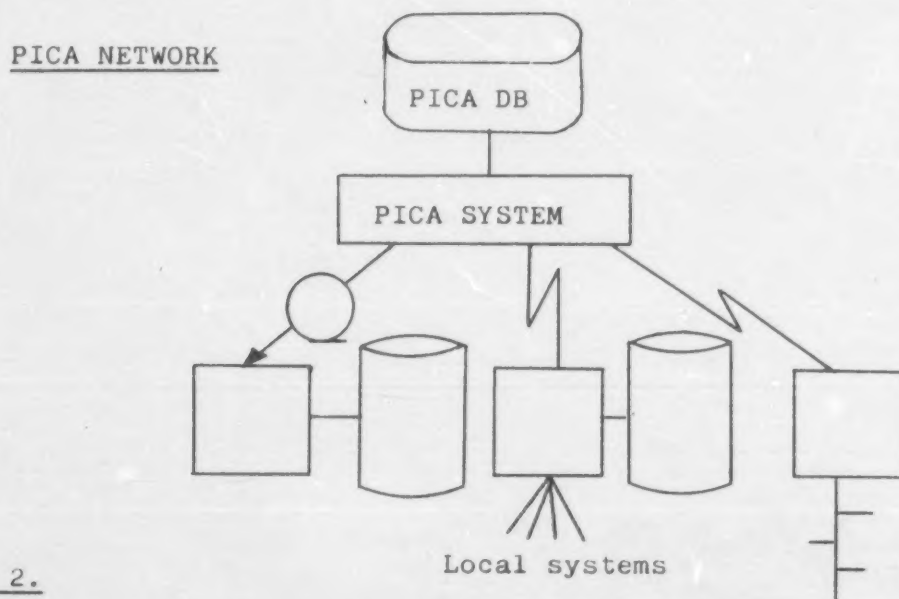


Fig. 2.

DISCUSSION

Dr. A.H. Helal: Librarians have now been using computers for some twenty years, and are by now aware of many of the advantages of computers and the products that can be obtained. I would like to ask you what new aspects are being presented by PICA.

Costers: I agree that people have been talking about totally integrated systems for many years. I think it is important to actually realise some practical achievements even if these are rather simple and limited.

Prof. A.J. Evans: Ten years ago it was a gleam in the eye. Now we are beginning to see working systems.

Costers: I have tried to describe PICA as it now functions rather than the new developments.

Mr. F. Boeckx: In Dutch university libraries there is a great variety of other languages than Dutch. So the PICA-system has to subscribe to many machine - readable bibliographic files to give real advantages to the individual libraries.

Costers: That is true. There will have to be about 2 million bibliographic descriptions in the data-base to give real advantages. In relation to this the cost of storage will get less and less.

Mr. L. Gärdvall: How are you going to extend the present 3 or 6 character search key when you are extending the support for interlibrary lending.

Costers: We are now studying different algorithms for an extended search key, but have not yet decided on a solution. The result of our studies will be published. Present search key statistics look like those of LIBRIS II.

Dr. P.J.C.A. Pinxter: I am a little worried as to the development of a search key containing for instance the first, third, fourth and seventh character of a surname. This would be too complicated for a simple user who wants to search the catalogue.

Costers: The user himself does not have to remember which character he has to choose. He just keys in the beginning of the surname. The computer then selects, itself, the character needed for the search procedure.

Dr. V. Wehefritz: I did not understand why the sorting of the characters need be changed from library to library.

Costers: It is related to the catalogue filing rules which may differ from library to library.

Mrs. E. Törnudd: Which technological university libraries contribute with input of cataloguing information into PICA.

Costers: None.

COOPERATION IN LIBRARY USER EDUCATION

Nancy Fjällbrant

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Introduction

User education is often regarded as one of the newer roles of the academic library. The history of the development of user education is short (but well documented) when compared with such traditional functions as acquisition, cataloguing and interlibrary lending.¹⁻⁴ Recent years have seen a considerable increase in the practice of orientation and instruction as librarians have become interested in the active exploitation of their library resources. However, resources provided for user education programmes are often very meagre - giving the impression of a luxury function to be conveniently reduced in times of economic need. Lack of tradition, combined with lack of resources, should make this field of librarianship particularly suitable for both national and international cooperation.

The aim of this paper is to examine which areas of user education are particularly suitable for interlibrary cooperation. Examples of a number of cooperative projects will be given, and possible areas for future projects will be discussed.

Goals and objectives for user education

In planning education programmes for library users, it is necessary first to define goals and objectives. After this, course-content and timing of the various stages are decided, together with the teaching methods and media to be used. The result of this planning is then tested in a practical situation, and evaluation is carried out in order to assess the effectiveness of the programme. (See Fig. 1.)

Goals and objectives can be divided into three main groups - cognitive, concerned with understanding, affective, concerned with feelings and attitudes, and psychomotor concerned with coordinated motor activity.

Library use is not part of a separate academic discipline such as zoology, history or sociology. It consists of a number of skills, which can be made use of in connection with

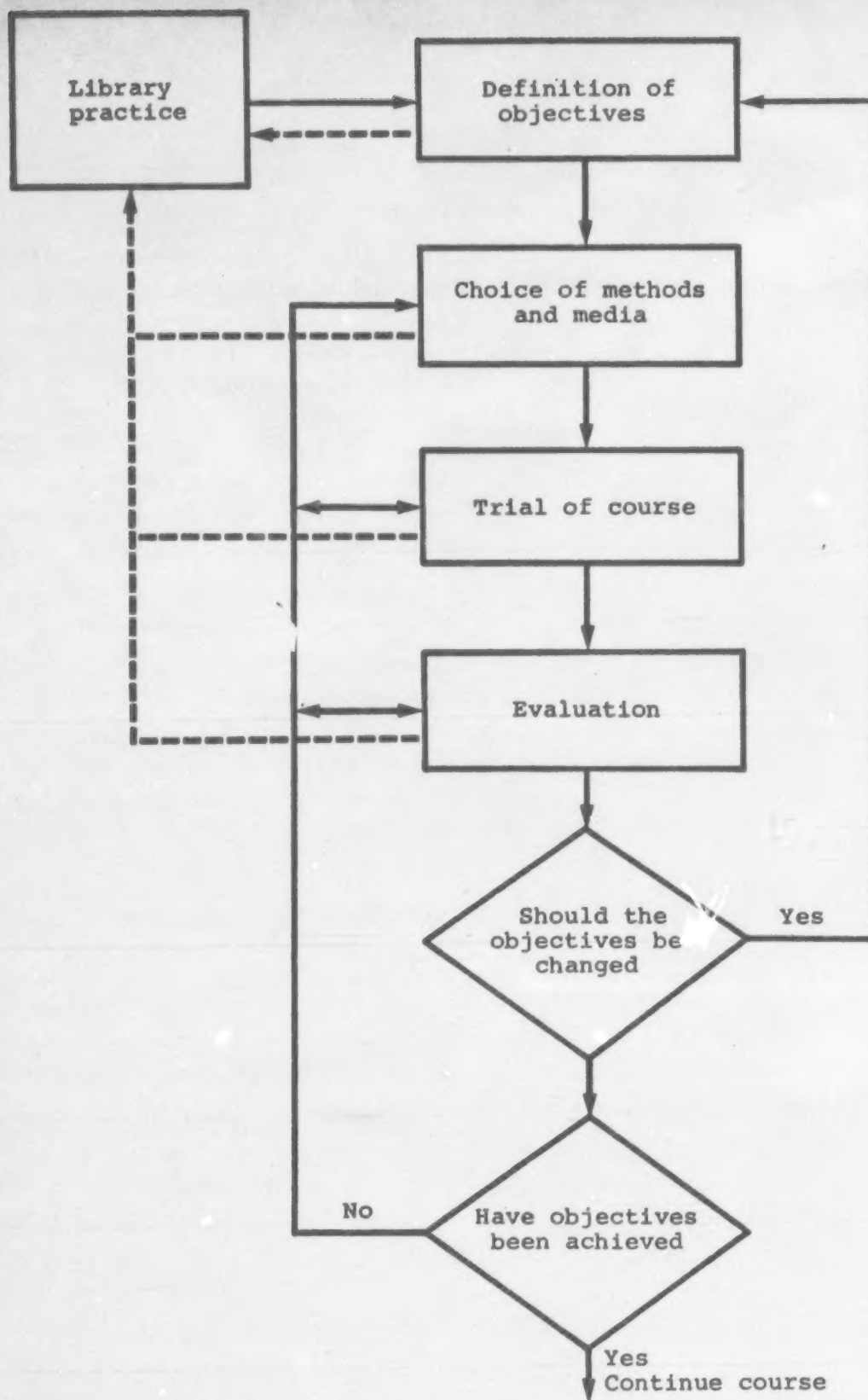


Fig. 1 Development of a course of education in relation to existing practice

other academic studies, so goals and objectives must be in accordance with the needs of students and academic staff. In addition, the objectives for programmes of user education arise, in part, out of existing library practice.

Those parts of library user education that are concerned with cognitive objectives that are similar for any place - such as the use of a particular tool for information retrieval - for example, the use of Biological Abstracts, or information searching in a given discipline - medicine or the social sciences - will be suitable for cooperative projects. Where objectives are concerned with attitudes to the use of a given library, or the use of a particular tool in that library, programmes of user education must be individually designed to meet the needs of the actual user group and the existing library practice. Thus library orientation programmes must be individually produced. Today, there are several examples of cooperative projects in user education. These illustrate the possibilities for cooperation where the objectives are of a generally applicable cognitive nature.

The cooperative production of tape/slide programmes for library instruction : the SCONUL project.

In 1970, SCONUL (Standing Conference on National and University Libraries) set up a Working Group on Tape/Slide Guides to Library Services. The aims of this project were to:

- (1) encourage cooperation in the provision of tape/slide guides to library services for higher education and academic research;
- (2) sponsor production of such guides as effective teaching packages;
- (3) provide a forum for discussion among librarians, educational technologists and others engaged in this work;
- (4) provide the dissemination of information on tape/slide guides through publication and other means.

Tape/slide guides are relatively cheap both in terms of production costs and equipment for viewing. Programmes are flexible - suitable for both group and individual teaching, and the guides can easily be updated. Further, the medium, with its cheap use of colour, is suitable for many aspects of library instruction.⁵ The SCONUL tape/slide guides were produced on a cooperative basis by a group of three libraries - with one library acting as producer and the other two as consultants giving advice and criticism on the scripts and photographic material.⁶

Standardisation is necessary in any form of cooperative project. The SCONUL Working Group issued recommended standards for the production and mounting of slides, and for the recording, pulsing and editing of audio-tapes.

Equipment was recommended for the playing of the finished products. The finished programmes included a set of slides, a pulsed audio-cassette, script, statement of target population and aims and a copy of any notes or handouts intended for the users. At the beginning of the SCONUL project twenty-one university and two national libraries were involved in the development and production of thirteen programmes. Early SCONUL guides covered such subjects as "Introduction to Information Retrieval", "Guide to the Use of Chemical Abstracts" and "Guide to the Use of Literature in Medicine and Related Subjects" (see Appendix for further examples of SCONUL guides).

In 1973, in an attempt to give the finished programmes some degree of unity, attention was focussed on standard evaluative procedures. Much help was given to producers by a research group working at the Institute for Educational Technology and the University Library at the University of Surrey (financed by an OSTI research grant). The project team did a great deal of work on the formulation of objectives for the second round of tape/slide productions (involving some thirty-five university and polytechnic libraries) and on subsequent evaluation.⁷

The use of the English SCONUL tape/slide guides for library users who do not have English as a native language was studied in Sweden, in collaboration with the Surrey group, in 1973/74. Evaluation showed that, even when the English tape/slide productions were used directly, without any translation, there was a good "immediate learning effect".⁸ These studies catalysed widespread use of the SCONUL guides, not only in Sweden, but also in other Scandinavian countries. The SCONUL tape/slide guide project is a good example of a cooperative scheme in user education where, through discussion and standardization, a number of useful teaching aids have been produced, at relatively low cost, for widespread use.

The travelling workshop experiment.

In July 1975, the Travelling Workshop Research Project was started at Newcastle Polytechnic Library on a BLRD three-year research grant. Travelling workshops were to be set up to teach about information handling in three areas: biology, mechanical engineering and social welfare.

The basic concept of the Travelling Workshop, as set out by the British Library Research and Development Department, was as follows:⁹

A Travelling Workshop is envisaged as a "teaching laboratory", which may be set up at the appropriate institutions (generally universities and polytechnics) to provide information, source materials, teaching aids, demonstrations and examples. It should be staffed by a multi-disciplinary team of experts working closely with the institutions' own teaching and library staff, who will be encouraged to follow up the demonstration of principles by the workshop.

Project Objectives

"To implement and run pilot workshops in three different subject areas.

To assess the impact of the workshop on the host institutions and the participating individuals.

To make recommendations for further work to educational institutions and national bodies with an interest in this area."

The objectives for a Travelling Workshop were set out as:

Objectives of a Travelling Workshop

"To demonstrate to teaching and library staff how various aspects of information handling may be taught and incorporated into the student's curriculum.

To encourage a continuing educational programme in the institution and to further library-departmental co-operation to this end.

To make students aware of sources of information in their fields and to show how to use them effectively.

To outline and illustrate the basic principles of communication and scientific writing in the chosen subject."

The original workshops were designed as three-day courses with a fairly high percentage of formal lectures on information sources within the given discipline. Students also took part in practical literature searching sessions. Experience from these early workshops led to the conclusion that changes were necessary; "The overwhelming impression was that the students had not enjoyed the lectures, but had, in contrast, enjoyed the practical work sessions... the content of the lectures had been too detailed and had focussed too much on bibliographic aspects (one student thought that 'this is what library school must be like')".¹⁰ As a result, a new workshop format was designed with the emphasis on a self-instructional handbook to be used in practical exercises, which formed the basis for self-assessed self-paced studies. This kind of self-instructional package can be used for a large number of students. Multiple sets of practical exercises avoid duplication of work by individual students.

It became apparent that there was a demand for packages of materials that could be used by various libraries in their own courses. Self-instructional packages were designed and evaluated. Each package included student handbooks, practical exercises and answers to the exercises, posters and an audiovisual programme relevant to the subject. It is hoped that the experience gained from this project will lead to the production of teaching/learning packages suitable for use in many institutions of higher education. This would reduce unnecessary duplication of effort.

Cooperative development of multi-media programmes for on-line information retrieval.

The last ten years have seen a rapid growth in the availability of computer-based on-line information retrieval systems. There has been a corresponding increase in the production of promotion, training and education courses connected with on-line user education. In a recent survey, Keenan concluded that "there is a great need for rationalisation and cooperation in the training for effective use of on-line services".¹¹

During the past year there has been an informal cooperation between a number of organisations in the production of multi-media programmes for education on on-line information retrieval. Use has been made of the MEDIATRON multi-media teaching device developed by the Central Information Service of the University of London. This instrument is based on a stereo-cassette tape recorder which is capable of simultaneous recording of digital signals to control subsequent display on a Visual Display Unit, audio commentaries, and pulses for triggering photographic slides.¹² A number of packages have been developed at the CIS, University of London, Chalmers University of Technology, Gothenburg, and the Department of Library and Information Science, Loughborough University.^{13, 14} These packages are designed to cover various aspects of information retrieval such as:

- (1) orientation
- (2) log-on routines
- (3) basic search-language commands
- (4) specialized search techniques
- (5) database coverage
- (6) use of a specific database.

Examples of orientation programmes for on-line retrieval are "The use of wind-power for heating" and "The presence of DDT in seals in the Baltic" (produced at Chalmers Library) and "On-line information retrieval" (CIS, London, and Loughborough University). Search language programmes on DIALOG, RECON, ORBIT IV and ELHILL 3 have been produced by CIS, London, and Chalmers Library. Programmes on searching a range of databases have been made by CIS, London, who have also produced programmes on the use of

specific databases such as "Searching the ERIC database; CIS have also made programmes about searching within a specific subject field: "Searching the mathematical literature online", "Searching the biological literature online".

Some of the programmes have been designed as self-teaching packages. These packages have already been used in a number of institutions and countries throughout the world; Belgium, Brazil, England, Holland, Sweden. This development of MEDIATRON packages provides an example of informal cooperation between a number of organizations, where the members have provided stimuli and ideas to the other participants in the production of user-education teaching material of general applicability.

Clearing houses for information on user-education projects.

If there is to be cooperation in library user education, it is necessary to be able to find out about programmes and material easily. Library instruction clearing houses have been established in a number of countries. Perhaps the best known clearing house is Project LOEX - Library Orientation - Instruction Exchange, Center of Educational Resources at Eastern Michigan University, Ypsilanti, Michigan.¹⁵ Project LOEX serves as the national loan centre, for the U.S.A. for libraries interested in user education. A number of state and regional associations in the U.S.A have also established clearing houses for library instructional materials within their geographic areas. The Materials Bank, at Loughborough University of Technology Library, serves as the British national clearing house.¹⁶ This bank invites participation from all types of libraries. There is an Australian clearing house for material on user education - the Data Bank for User Education Materials, at the Caulfield Institute of Technology and a bank of Swedish and Scandinavian material at Chalmers University of Technology Library, Gothenburg. All these clearing houses help to collect material and spread information on user education material to libraries interested in setting up new programmes.

Possible areas for future projects.

There is now a considerable interest in library user education in many countries. It is important to avoid duplication of activities leading to a waste of time and economic sources. Areas that suggest themselves as particularly suitable for cooperation are those where there are cognitive objectives of general applicability.

Examples of user education projects suitable for cooperation are:

1. Education in computerized on-line information retrieval, where use is made of international databases and systems. Education programmes about these information resources are of wide general interest. Cooperative production of textbooks, audio-

visual demonstration programmes, and self-instructional modules would be advantageous. Material suitable for different levels of instruction - for example, for undergraduates, postgraduates and industrial engineers, is required.

2. Self-instruction packages in information retrieval within specific subject areas. Such packages might contain some form of textbook, plus exercises suitable for individual use. In the construction of this kind of package, it would be necessary to take into account national information resources and sources within specific language fields.
3. Library user education material specially geared to the needs of developing countries.

In planning cooperative projects in user education, it is important to consider standardisation, with respect to production and equipment and the distribution of the finished products.

There remains one further area where cooperation in library user education could be very advantageous - in training librarians in the problems and practice of user education. This could include such topics as studies of the needs of the user population, formulation of goals and objectives, teaching methods and media and methods for evaluation. Some library schools offer courses in user education, but, as was pointed out by Stanton in 1978, "there has not been a proliferation of courses that focus on teaching librarians how to teach the use of the library".¹⁷ User education should always be closely geared to the needs of the user. These naturally differ in different types of institutions and their libraries. It seems, therefore, possible that seminars/workshops on user education for librarians working within the same type of library might prove to be an extremely effective method for teaching librarians how to teach. The librarians would possess basic knowledge of the information resources available, and training could then be concentrated on the learning/teaching aspects of user education. Is this perhaps an area suitable for IATUL sponsorship?

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DISCUSSION

Dr. Z. Kováts: I want to add a contribution about the use of tape/slide sets in Hungary. We bought 5 of the SCONUL sets and then we made another tape/slide about our own library services. The English texts have been translated into Hungarian, and they are thus available in both languages.

Fjällbrant: Which SCONUL tape/slide presentations have you bought?

Kováts: How to use reference tools, How to use Chemical Abstracts, How to use SCL.

Prof. M. Slajpah: Can we get the address of SCONUL and the prices of the tape/slide sets.

Fjällbrant: The Appendix to my paper contains a list of SCONUL tape/slides. It is easiest to write directly to the producing library.

Prof. A.J. Evans: The Information Officer for User Education (Ian Malley), who is based at Loughborough University may be used as a contact point in the U.K. for any information and or details of productions such as tape/slides.

Mr. P. Durey: Is it possible to obtain information on the quality of the various tape/slide presentations?

Fjällbrant: The BL report contains information on evaluation of a number of SCONUL tape/slides.

Evans: A limited number of reviews are now beginning to appear in INFUSE, the monthly publication of the Information Officer for User Education.

Dr. V. Wehefritz: Would it be possible for Dr. Fjällbrant to tell us more about the use of the SCONUL tape/slides at Chalmers University Library?

Fjällbrant: We have used general guides such as the "Introduction to Information Retrieval in Science and Technology" extensively in our undergraduate programme. Guides to the use of specific tools such as Chemical Abstracts and Biological Abstracts have been used both as point-of-use devices and for group instruction. Guides to literature within specific disciplines - such as medicine - have been used in some 40 courses for postgraduates and practising industrial engineers.

Dr. R. Kriek: First I would like to say that I agree with Dr. Fjällbrant that cooperation in user education could be useful. I would then like to ask if you are teaching students how to build up a personal documentation system.

Fjällbrant: Postgraduates are given some training in personal manual files. We do not as yet have computerized personal files. Alina Vickery at the University of London has done work on this.

Kriek: What do you mean by evaluation?

Fjällbrant: Evaluation is an attempt to obtain information about educational courses or programmes, which can be used for decision making. Evaluation should be carried out in many different ways.

Kováts: The most important problem in my view when "marketing" media/library services is how to change the role of the teacher from that of presenting information to the students with the help of textbooks, to that of guiding the students in learning how to learn make use of available resources. This change in role is essentially an interdisciplinary problem that should be solved together with the teacher.

Appendix

List of SCONUL Tape/Slide Guides from Fjällbrant, N. & Stevenson, M. User education in libraries, London, Bingley, 1978. pp. 49-51.

Some of the programmes available under the SCONUL cooperative scheme are listed below together with, in each case, the name of the library from which further information can be obtained.

Introduction to information retrieval in science and technology 41 slides, 20 minutes. Loughborough University of Technology.

Uses a small search as a case study to indicate and exemplify the basic steps of an information search.

Guide to searching British patent literature 52 slides, 18 minutes. Science Reference Library.

Discusses the identification of British patents and how to locate patents on a particular subject. Geared to facilities at the Science Reference Library.

Basic guide to the use of Beilstein 50 slides, 12 minutes. University of Salford.
Primarily intended for undergraduate and research students.

Guide to the use of Chemical abstracts 67 slides, 26 minutes. University of Southampton.
For undergraduate chemistry students with little or no prior knowledge. Intended to give a general awareness of what CA is and what it can do. Techniques of use of the various indexes are mentioned.

Guide to the use of literature in medicine and related subjects 80 slides, 17 minutes. Medical Library, University of Newcastle-upon-Tyne.

For those with no knowledge of the use of medical libraries. Covers the means of access to primary and secondary literature including computerised information retrieval.

Guide to British official publications 35 slides, 15 minutes. University of Warwick.
Particularly suited to courses in politics, public administration, law and librarianship. Introduces the nature and use of both parliamentary and non-parliamentary publications in a logical way.

Guide to the London Bibliography of the Social Sciences 35 slides, 20 minutes. University of York.

A guide to the use of the Bibliography, the subject catalogue of the British Library of Political and Economic Science.

Literature searching for management information 80 slides, 25 minutes. The Library, Management Centre, University of Bradford.

Case study illustrating the structure of the literature of management and how to search it. Primarily designed for postgraduates.

How to use Biological abstracts 41 slides, 20 minutes. University of Surrey.

Describes the function, content and arrangement of BA including the use of each of the various indexes.

Introduction to the literature of politics 80 slides, 25 minutes. University of Hull.

Aimed at first year research students. Describes the structure of the literature, illustrated by a simulated search.

Economic statistics: a case study 49 slides, 13 minutes. University of Lancaster.

By means of a case study enquiry based on the motor industry, some of the major types of statistical publications available in the UK are introduced.

Searching the literature of science education 58 slides, 30 minutes. Chelsea College, London.

Population census of Great Britain 45 slides, 30 minutes. University of York.
Covers the historical development of the census, the 1971 census, and identifying and using census papers in libraries. Illustrated with archival and published census documents as well as expository materials.

Introduction to information retrieval in the social sciences 2 parts: part I 62 slides, 20 minutes; part II 61 slides, 20 minutes. Loughborough University of Technology.
Suitable for second year undergraduates or new postgraduates, with the aim of improving library and communication skills.

Introduction to Science citation index 41 slides, 20 minutes. Institute for Scientific Information (Europe).
Explains how SCI is constructed and describes its main sections with detailed examples.

The literature of computers 55 frames, 12 minutes. City University, London.
Case study of a search for information on computerised traffic control.

The literature of economics 63 slides, 24 minutes. University of Essex.

Detergent pollution of water: a model literature search 49 slides, 18 minutes. University of Sheffield.

How to use reference books 2 parts: part I 40 slides, 8 minutes; part II 26 slides, 5 minutes. Polytechnic of North London.
Part I considers reference books relating to facts and figures; part II examines works relating to people and places.

Law reports tape/notes: part I 18 minutes; part II 14 minutes. University of Hull.
Part I covers the Incorporated Council of Law Reporting, Law reports, and part II reports issued before 1865, commercially produced reports and specialised series.

Other programmes which have been produced under the SCONUL scheme but which may not now be available except perhaps from the British Library Lending Division, include the following:

Introduction to the literature of sociology 28 slides, 16 minutes. University of Bath.

Outline guide to the literature of chemistry 50 slides, 16 minutes. Royal Holloway College, London.
Outlines a method of literature searching leading through the basic structure of chemical literature in a logical sequence.

Guide to abstracting and indexing services 32 slides, 12 minutes. University of Surrey.
Intended for students who have not used abstracts and indexes previously.

The literature of law: an introduction for students 80 slides, 25 minutes. Trent Polytechnic, Nottingham.
Intended for first year students of English law.

Finding out in geography 34 slides, 12 minutes. Polytechnic of North London.
Description of a literature search on forestry in Scotland for second or third year geography students.

Teaching packages for engineering students 6 packages including slides and ohp transparencies. Trent Polytechnic, Nottingham.

For use by third and fourth year students. Case studies on literature searching for electrical, production and design engineers and the literature of electrical, production and mechanical engineering are covered.

Programmes in the course of preparation include: The literature of theses (University of Manchester), The use of periodicals and their indexes (University of Exeter), The literature of audio-visual materials (Polytechnic of the South Bank, London), and The literature of music (Polytechnic of North London).

Guides on the following subjects are in the early stages of discussion as to format, etc: environmental sciences; compilation/citation of references; social statistics; art and design; American studies; literature of civil engineering; literature of electrical engineering; EEC documents; literature of education; company information.

JOURNALS IN TRANSLATION

A GUIDE TO JOURNALS CONTAINING TRANSLATIONS

JOINTLY PUBLISHED BY THE INTERNATIONAL TRANSLATIONS CENTRE, DELFT, THE NETHERLANDS, AND THE BRITISH LIBRARY LENDING DIVISION, BOSTON SPA, WEST YORKSHIRE, UK.

This publication lists those journals which are translated cover-to-cover or selectively, together with journals which consist of translations of articles selected from multiple sources. Included are the multisource translation serials published by the various government sources in the US, which add considerably to the social sciences field.

In addition to the main alphabetical listing of titles, there is a Key-Word-In-Context subject index, an index of original titles, and a list of publishers and/or distributing agents.

Although considerable efforts have been made to clarify the information available, there are certain titles for which a diagrammatic or tabular approach was deemed essential. These included the various translations of ATOMNAYA ENERGIYA, DOKLADY AN SSSR, DENKI GAKKAI RONBUNSHI, DENSHI TSUSHIN GAKKAI RONBUNSHI and so on.

The decision to produce a joint publication was made to avoid the duplication of effort in the revision of lists of translated journals previously published separately by both organisations. The last ones were TRANSLATIONS JOURNALS (published by ETC, later International Translations Centre in 1974), and JOURNALS IN TRANSLATION (published by BLLD in 1976).

A microfiche version of JOURNALS IN TRANSLATION is available from the Instituto de Informacion y Documentacion en Ciencia y Tecnologia, Joaquin Costa 22, Madrid, Spain, to whom enquiries regarding the fiche version should be addressed.

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TEACHING LIBRARY CO-OPERATION TO LIBRARY STUDENTS

Ben Rugaas,

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1. There have been 30 million unique titles published since Gutenberg - how many libraries have anything more than 5 % of these - I guess some have less than 1/2 %.
2. There are 50-100 thousand journals published currently - how many libraries subscribe to more than 10-15 % - some will buy less than 1/2 %.
3. About 500 thousand books will be published world-wide in 1974 - how many libraries will buy more than 10-15 % - some will buy less than 1/2 %.

Given this situation it is like finding a needle in a haystack to pick the "right" materials that will be both useful and used. Since the needle is not frequently found, presidents, chancellors, provosts, deans, and librarians sometimes are confronted by students and faculty who demand a better acquisitions budget to try to relieve their frustrations.

(Resource sharing in libraries ed. Allen Kent)

1. My topic in this paper is teaching library co-operation to library students. The title could be read as a half statement implying that library co-operation is a good thing that ought to be taught to library students. Personally I do believe that library co-operation is of vital importance to improve the library's services, and consequently it becomes a matter of equal importance to include in the library education the teaching of the skills and attitudes necessary to reach the library's goal to provide a best possible service to its patrons. In a conference arranged in Pittsburgh in April 1973 a group of 175 people discussed how to accelerate the process of resource sharing in libraries.

This conference established the following points, which I find most useful in the way they sum up the rationals for library co-operation and thereby also the need for including this in the curriculum of library education:

1. It is impossible for libraries to be self-sufficient - nor has it ever been possible in modern times.
2. Aside from library materials required in connection with specific courses, it is seldom possible to predict precisely which materials will be useful, and for how

long. Despite this, some or much of the library budget, particularly in research libraries, is spent in stocking for future needs; accordingly, substantial portions of library collections are seldom used.

3. There is no reason why all library materials of potential usefulness on a campus must be physically stored on that campus - if materials can be made available at the point of need when the requirement arises.
4. The mechanisms for resource sharing are reasonably well understood.
5. There are no reasonable alternatives to effective resource sharing.
6. Based on the state of the art of resource sharing, the time for acceleration of effort is "Now."

The recent years development has also come up with terms like "the self-renewing library" and "multitype library co-operation". These developments together with the relations to other professions in the information handling field, the impact of new technology and developments on the international scene will be the background for my discussion of the teaching of library co-operation to library students.

2. One of the more promising trends in library and information science work in recent years has been the growing awareness of the need to focus on the user.

User and use studies have given a new momentum to better library services, and this is also reflected in the library education. In this connection it seems appropriate to point to the fact that librarians are just one part of the total picture of information agents. Alongside us we find journalists, teachers and a number of new brands of "media specialists" - all occupied with the task of communicating knowledge, each in his own fashion. And as library co-operation grows, it is wise to keep in mind the necessity of co-operation also with other information handling agencies. Our relations to these other neighbouring professions should be seen as an important part of our libraries' co-operation and extension work. If we look at librarians and teachers for instance, we find that they are basically doing the same thing - communicating knowledge. They are more or less aiming at the same groups, but traditionally the methods of communication differ. If we see their work plotted along a continuum with teachers in one end and librarians in the other we will find that somewhere in the middle their work and methods tend to overlap. And we are aiming at the same goals more often than not. So, library co-operation should therefore also imply co-operating with other professionals with related tasks. And if we look at other bodies occupied with information, like postal services, telecommunications and broadcasting, and note how they are organized to run an effective national and international service, do we then get ideas or perhaps arguments for library co-operation to provide library customers with a better service?

3. The international scene of library and information work has seen a number of developments aiming at better library co-operation in the past five years. Within the UNESCO/IFLA programmes for UBC and UAP we have been provided with tools to cope with the more technical problems of library co-operation.

The main obstacles today are more to be found on the national and institutional level when it comes to the point of really getting interlending schemes, bibliographic control and other co-operative efforts to work. Very often the difference between formal and informal co-operation is illustrated by the difficulties in setting up resource sharing budgets devoted specifically to not buying materials but rather for developing the mechanisms for getting them from elsewhere. On this level there is not so much the question of teaching skills in co-operation, but rather one of teaching attitudes and beliefs. And in many instances this involves the persuasion of politicians more than the professional librarian.

4. By and large it seems justified to say that we have the necessary tools for library co-operation but that we in many instances lack the structure, legislation and organizational backing to do it in an efficient way, if at all. A new dimension has also been added to this by the introduction of computerized services. Whether one would look at library co-operation as a platform for library automation or vice versa, either way the possibilities of this new technology will be significant. The growth of international databases for bibliographic and fact retrieval indicates a trend of changes in the organization and retrieval of information. The possibilities this opens up for the future, needless to say, will have an enormous impact on the housekeeping routines in libraries and of course also on the teaching of various aspects of library and information science. I will not develop this any further in this presentation, but simply state that the aspect of new technology is of utmost importance when library co-operation is being considered.

5. From this follows that the profession of library and information science is in a state of transition - and that this has to be dealt with by educational institutions so we today can make tomorrows librarians and not those designed for the tasks of yesterday. In this process, quite apart from whatever subject content goes into the library school's curriculum, there are always the problems related to the status of the profession and the attitudes of the same profession towards any education for change. On the whole it seems fair to say that librarians as professionals have not acquired the status they ought to have compared with other professions. In his book "Libraries and cultural change" Ronald Bengtson has made some observations on this when he says:

"At first sight it seems that status in this wider sense is mainly determined by the remuneration which society pays for services rendered. But further examination reveals that this is far too simple. What is the status of a stockbroker vis-a-vis a

docker, both of whom may be relatively well paid? Some people get high wages; others get a low salary. Clergymen and teachers have always been poor, but in an unlettered world their status was nevertheless secure; now this may not be so. In fact, this is another chicken-and-egg syndrome - which comes first, the pay or the recognition? In some societies even now people may be respected because they are not well paid, and the respect is their only reward. Yet sainthood is not a profession. This circumstance is mentioned because librarianship, like the teaching profession, is recognised as being of great importance until the time comes for the provision of money for it. Our real values are reflected by what we spend our money on. With regard to librarianship, or any other profession, there are naturally several levels of reality. First, what the world says about the profession; second, what the profession says (officially) about itself, third, what librarians think about each other and fourth, what they actually do. If these levels could be added together, the result might be the formulation of a status for the librarian - as distinct from a particular librarian in a particular place. But since this type of analysis is not an addition sum, we cannot arrive at a simple solution."

The profession and its status has also been affected by the new technology mentioned earlier. Since World War Two we have been witnessing a number of separatistic movements, usually linked up with some new technological development, that want to be recognized as something very special and consequently use a lot of their time to prove that they are doing a job totally different from what librarians do. I will return to this point which deals with unity of the profession later in my paper, but at this stage I will join in with Douglas Foskett when he says: "Nothing distinguishes an information scientist from a librarian - unless it be that a librarian lacks the ability to comprehend and transfer or circulate information, and I do not believe that this is the case."

6. In the introduction to this paper I mentioned the term "multitype library co-operation". This has been defined by Orin F. Nolting as:

"A means of mobilizing total library resources to meet the needs of the user without regard to the type of library involved and without classifying the user as a public, school, academic, or special library patron. The goal is to help all library users make more effective use of all library resources and services related to educational, work, and recreational needs. The primary responsibility of each type of library is respected, but no one library can economically satisfy all demands made upon it."

An approach like this will of course mean a much closer co-operation between different types of libraries, in a regional, national or even international network. What we are after is to build a synthesis of library user education for research, work, school, recreation and life-long learning, all the time focusing on the users of our services,

which again means that information retrieval ought to be taught in schools at all levels, and that the information specialist, the librarian, should have a place in the staff of most schools over a given size. Or to make it as a statement: Every school of a certain size should have a librarian on the staff. And if the library schools are to prepare future librarians for this as one vital requirement for co-operation, that would mean bringing into the curriculum aspects of education and psychology linked up with sociology and communication. And this is just what a number of library schools have been doing for quite some years.

7. I have already touched upon the fact that librarians often want library education to be like the one they got themselves, or rather, as close to the "real world" as possible. Now, if this were to be true also for the teaching of library co-operation I am afraid that not much would be found in the curriculum. This problem can be summed up in another statement saying: Any library school will have problems in teaching and motivating students for something that does not seem to exist in the real world of libraries. And when it really comes to promoting library co-operation through the various parts of the curriculum of library education, one will soon find that both for new students and for experienced librarians there are problems to be dealt with on the cognitive as well as the emotional level. Taking care of the knowledge, understanding and the conceptual framework on the cognitive level is normally far easier than being able to alter attitudes, values and beliefs that operate on the emotional level.

8. I have already mentioned what I call "the unity of the profession". Both for running effective library services and for the teaching of librarianship with an emphasis on library co-operation, the unity of the profession makes a better platform for future co-operation and resource sharing. The overriding problem in library co-operation is in getting people to work together productively. The writing on the wall seems to prophesise the death of the single collection, universal library, and the birth of the "self-renewing library" dependent on depository collections and library co-operation. So, if the librarians of today want their new colleagues of tomorrow to have their mind tuned to library co-operation they had better set a good example now. Or to say it in a more cryptical way: If your parents didn't have children there's a good chance that you won't have any either. I have seen my job in this paper as one of advocating library co-operation and its implications for library education. I am fully aware of a number of obstacles and limitations to such co-operation, but I do believe that we ought to start now. And that the teaching of library co-operation to library students should be a shared responsibility between the profession and the educational institutions, and with the providing of the "real life" examples of how this is working out. So, this leads up to my closing statement which underlines this shared responsibility in saying that: Every profession gets the education it deserves.

DISCUSSION

Mr. G.A. Hamel: Do you give your students some practical training in group cooperation?

Rugás: Yes, we do. We think this is very important. In our school an ever increasing part of the work is carried out in the form of group projects. This creates some problems - the students want to be evaluated on a group basis. The increase in group work is typical of other Colleges of Librarianship. We need help from the libraries in providing opportunities for practical projects for students. I know that this means extra work for you, but we really need help in providing practical work experience.

Mr. S. Westberg: It has often been said that people became librarians because they did not want to become teachers. Would you say that this is an attitude that is changing?

Rugás: I think that there is a change in attitude now. Library school students are more open-minded today and more like students in other disciplines.

THE EXPERIMENTAL SCIENTIST AND HIS LITERATURE SEARCHES

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The problem

The discussion concerning the inundation of research scientists with Everest high mountains of literature has been going on, without interruption, since about 1945. In the last decennia, the situation has certainly deteriorated due to the almost endless appearance of new scientific journals and review series. This not only increases the need for more reading time but, as articles often appear with similar contents at the same time, covering the same original nature of the subject concerned, it calls for more critical reading, comparison with data already on file and a reluctance to file articles which have not previously been screened. In addition to this, many articles are published for no other apparent reason than that of the publisher wishing to fill his columns. Finally, Library Committees are confronted with the problematical choice of buying, or ignoring, "Handbooks" or Review Series which are often prohibitively expensive and which are, in many cases, completely outdated by the time that they end up on the scientists desk.

The execution of experimental studies without a thorough study of the literature available before undertaking the investigation, is something that has always plagued the Sciences. Previous work that had already been done in the same line was either ignored or it was even explicitly denied that similar investigations had ever been previously carried out. The more philosophically orientated scientist has frequently accepted this situation, taking into consideration that, were these investigations carried out properly, they would at least serve to substantiate earlier findings published elsewhere.

The time for change

This latter attitude became unacceptable when the world-wide depression of the early 1970's started to interfere with scientific research. Considerable staff reductions were a frequent result of the deteriorating economic situation, vacancies were no longer filled and so less and less time remained for research. Academic teachers were hit even worse. Due to the shortage of scientific staff, their teaching load was increased and reduced the

time available for theoretical classes, classroom experiments or clinical demonstrations. This gave rise to the demand for more rapid and reliable forms of retrieval of information.

Furthermore, sponsors of scientific research, whether industrial companies, government agencies or even the investigator's own University Committees, began to subject requests for grants to a serious scrutiny by using peer review procedures. These procedures, once again, called for rapid and reliable access to previously published information - ironically enough, not only for those begging for grants but also for those bodies administering the funds themselves...

Libraries appear to have acted quite adequately to this yearning for information by employing an intelligent procurement policy together with appropriate filing and retrieval systems and making use of inter-library co-operation. We, in the Medical Sciences, are often looked upon with envy by scientists of other disciplines as we are in possession of our famous Medlar System!

But, what about the users of all this information? Are they mentally equipped to keep up-to-date by making full use of the Thesaurus of information prepared for them by their librarians? Experience shows, that in this respect, scientists can be grouped in three classes. Included in these classes are: the conscientious reader, the browser and the fatalist. It has also become apparent that "telling" or "preaching" to the browsers and fatalists is of no help to them. Psychologists tell us, that taking the right decision, does not, by far, depend only on cognitive factors. The big drive behind behaviour is often emotional and is clearly and amply demonstrated by the practice of dangerous habits such as eating raw meat, smoking, overeating, driving under the influence of alcohol or drugs and the failure to take preventative measures in avoiding venereal diseases during sexual intercourse.

Fortunately, Medical Psychology can also give a pointer toward a solution to such problems. The reader can also be taught better habits in keeping up with available literature by the use of three types of measures. Persuasion, credibility and feedback: Persuasion, resulting from explicit case-study work and which demonstrates the waste of time, money and effect, being the inevitable result of ignoring the literature, is often an effective measure. The credibility of the instructor is also of paramount importance; if, in his own work, he practices what he preaches to others, he may be able to convince the latter of the correctness of his statements. Finally, full attention should be paid to the audience - communicator feedback loop; identification of the instructor with the student's problem rather than authoritarian barking or sneering can work wonders.

The rôle of the University

A crucial point in the relation of a scientist to his literature resources is, clearly, as to how well the University itself has prepared him for this essential part of his task. In our country, this aspect prompted a survey in which, with the professional help of Dr. Thomas Place of the Catholic University of Economy in Tilburg, we tried to find out how poorly or how well we had done. The guiding principle was based on the old Biblical expression: "From the fruits you will know the tree".

In total, 130 research institutes were sent a questionnaire. Of these, 67 % were Government controlled laboratories and the remaining 33 % were engaged in work for industry or commerce. The response was 71 %. Those who responded were not happy with the way in which we trained our students in the optimal utilisation of published information: 70 % of them considered that our alumni were inadequately prepared. Quite striking for the attitude toward literature, already mentioned in this paper, was, that despite this apparent deficiency of young university graduates, only 23 % of the respondents had investigated the capabilities of candidates as to whether they were able to handle information sources adequately, when new staff were being recruited. About the same percentage did provide thorough training for newly recruited scientific staff, irrespective of any pre-existing knowledge or experience in the field of information retrieval.

I would be doing my medical vocation a great dis-service, which is therapeutical rather than just diagnostic, if I did not briefly outline the steps which we subsequently devised and took in an attempt to remedy this situation. Inter alia, until now our experience has fully substantiated a reversal of the old proverb, that the road to good intentions is paved with Hell!...

Dealing with literature as an essential and perpetual part of the curriculum.

Introduction to the various sources of information should be provided is the first phase of scientific education. This will include familiarisation with the main periodicals, serial publications and handbooks. Not only that, but an explanation as to where these articles are to be found in the library and on the shelves is appropriate. After this basic education, the acquisition of information should be explained. Once again, the right attitude may be of more importance than just the plain facts. On the one hand, one should try to avoid inducing a neurosis about the incomplete covering of the literature but, on the other, the student should not adapt the tendency of being easily satisfied, often expressed in remarks such as: "There does not seem to be any data on - - - - -" Frequently, this is an indication that the student is not bothered enough to investigate further! During this first confrontation with the literature, a simple personal filing

system should be prepared, which allows for rapid and efficient retrieval of information. Finally, the student should be taught as to how the acquired information should be disseminated in a short oral summary and, how it should be put in writing. The more trivial aspects of reporting, such as breaking down into sections, paragraphs etc. as well as avoiding long sentences, should be stressed. The use of Tables and Illustrative figures as a replacement for "narrating" quantitative data should be encouraged - of course, avoiding the listing of repetitive sets of figures.

In the later stages of University Education, the use of the literature should be integrated into the various branches of science. It is here that the tutorial staff can set a good example by bringing recently issued text-books or pertinent original publications into the classroom or clinical demonstrations with patients. This, in the light of our own experience, serves to stimulate the student - it induces an attitude, that one should not take too much for granted before having looked at the literature. Obviously, it is the responsibility of the tutor that the students are brought into contact with the most relevant journals. They should justify their selection by pointing out the criteria determining the value of the particular scientific journal involved. This might incorporate a double referee system, one which relies on a team of internationally accepted experts who review the manuscripts in a constructive way.

Postgraduate, and certainly postdoctoral, programmes should include an introduction as to how the literature should be handled at independent research levels. The senior student should be shown the procedures which his supervisors and sponsoring agencies follow and apply these procedures for their own use. Having made a thorough study of the literature, they should use this as a guide in assessing the relevance, validity and attainability of that particular research they are planning to undertake. Once having started on this course, they should try to keep up with the field and use the only valid approach: following progress by monitoring the steady stream of literature. This also includes attending symposia or, at least, procuring the published papers or summaries of those meetings which are of significance and have bearing on the research at hand. The supervisory staff should make a point of stressing that it is only in this way that senseless duplication can be avoided as well as the running into "dead ends". This clearly gives rise to the requirement that the professorial ranks must continuously inspire their junior colleagues to this end and, as indicated repeatedly before, that they proceed in this manner themselves.

Epicrisis

It is not rhetoric, that most scientific libraries represent a veritable treasure trove of information. The standing of many Institutes bear direct relation as to how these treasures are put to use. Consequently, a cordial collegial co-operation between library

and research staff should be established. But, as one cannot be expected to appreciate something of which one has no knowledge, the library staff should, first and foremost, make sure that the scientist is introduced in the use of sources of information. Once this has been achieved, the scientists' ability to deal with the literature should keep pace with his own scientific development.

Acknowledgement

Most of the data in this contribution to the IATUL conference and the major part of its underlying philosophy has been taken from the paper: Mossel, D.A.A. and Place, Th. W. 1979. "The need for academic education in handling scientific information for students of empirical Sciences". (Translation of original Dutch title). Universiteit & Hogeschool 25, nr. 4, 280-297, 15 refs.

PRESENTATION OF TWENTE TECHNOLOGICAL UNIVERSITY LIBRARY

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President of IATUL

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Ladies and Gentlemen

As so many colleagues from home and abroad have honoured us with a visit to our library, I should like to take this opportunity to tell you about the vote and accredited function of this library and a little about the way it actually functions. That is, if you are interested in hearing our view and how we regard our duties.

First of all, let me tell you that the Twente Technological University is the youngest of the three universities in Holland specializing in technology. This particular one was first founded in 1961 and enrolled its first students for their first semester in 1964. It is however, no longer the smallest nor the youngest university. In 1971, the State University of Limburg - albeit as of yet consisting only of a faculty of Medicine - was established in Maastricht, the most southerly town in the Netherlands, close to Aachen/Aix-la-Chapelle in the Federal Republic of Germany and Liège in Belgium.

Unlike other Dutch Universities, the T.H.T. (as we call the university for short) has been designed, as far as the layout is concerned, on Anglo-Saxon principles, being set up as a residential campus. It is situated in what used to be a country estate which was comprised of a large park with surrounding farmland. As is usual with universities situated on a campus, it provides on one single site, accomodation for everything and everyone: laboratories, faculty buildings, management, students and staff. This experiment in social integration has not received much credit, nor has it met with much sympathy on the side of the students who appear to prefer having rooms in town rather than making use of the accomodation provided on the campus itself - in spite of - or possibly because of - this ideal accomodation. These peculiar circumstances have not stood in the way of the rapid, almost turbulent development of the university. It started off with three faculties: Chemical, Electrical and Mechanical Engineering. The teaching programmes were rather unique in that they offered a baccalaureate degree, or to use the French term, a licentiate, something new to this country and regarded with a certain amount of disfavour. This in conjunction with a "doctoral" degree which can be used as a stepping stone in obtaining ones Ph.D. As of this moment, quite a number of theses have

been presented and defended against the queries of our senior scientific staff, comprising of some 100 full-time, plus part-time, (i.e. extraordinary) professors. This staff is complemented by approximately 400 other scholarly staff members together with other technical and administrative personnel which brings the total number of staff to between some 1.100 to 1.200 persons. At the present moment, having passed through 15 years of expansion, the university now affords other teaching facilities, beside those already mentioned, in the fields of Applied Mathematics, Applied Physics, Industrial Management and Public Administration.

Turbulent developments indeed! However, universities cannot keep expanding indefinitely; gates blow themselves out and, apparently, for some people, rather unexpectedly. And so we sailed into the doldrums. During the fifties, and even in the early sixties, there was this expectation of an unending and increasing need for new and differently educated engineers but, with the present economic recession, this situation has changed course completely. This is, however, not the place, nor the time, to dissect the underlying possible causes of this economic phenomenon. (One may call to mind the over-production of consumer goods, goods that might just as well, if not better, be produced in developing countries; the increase of wages and the explosive increase in the cost of living in the industrial countries; the physical transfer of technology and of complete production plants from Europe to the Third World. All this, together with society's changed attitude toward the so-called "blessings" of technology combined with an increasing awareness as to the negative aspects of industrial and military complexes.)

These phenomena have not missed out in making their effect felt in the social image of university education and in technological education in particular. This, consequently, has had a negative effect on the means available for education. Further to this, one result has been, that there is fierce competition between the universities, other schools as well as other levels of teaching, to lay claim to the scarce means available, such as staff and money. This battle, which is still going on, has resulted in our losing ground to primary, secondary and other forms of education. We can safely state, that growth is no longer dictated by internal factors. Accordingly, our university has re-orientated itself, and is still in the process of doing so. Despite the fact that it has never offered pure science in its study programme, always having occupied itself in the so-called applied sciences, the university's governing body has been re-assessing the situation, in the light of the previously mentioned developments. It has drawn the conclusion that, as a consequence, and in conformity with the expectations of society, it is necessary to be constantly on the look-out for other practical fields of study and research. In this context, I would like to mention the fields of bio-medical technology, intermediate technologies, technological assessment, educational technology, Third World aid programmes etc. etc.

The T.H.T. itself, is situated in a region which has already been suffering from economic stagnation for some time now. As far as the Government of the country is concerned, this also forms a political reason as to why one should seriously look into the relevancy of the university, an institution into which millions of guilders have been pumped over the past years, and to investigate as to whether new opportunities can be realized which, will not only stimulate the university, but also activate the economy of the region; but, just as elsewhere, Government policy is not always a product of linear and logical thinking. For that reason, the university will have to remain alert, so that it can react immediately - not impulsively, of course, but with imagination - to any possibility which may present itself. So much for the university.

How about the library? Under the present unstable conditions, aggravated by technological innovation, it is no easy task for this particular library (I would also think for any library) to formulate the library's goals and policy, but fortunately, some of the present library's characteristics - such as its internal structure and processes, the centralized administration together with the de-centralized provision of reader services through the various faculty libraries in conjunction with the Central Library - characteristics which were designed basically by my predecessor - have proved themselves successful over the years and, hopefully, will hold out for the next decade or so. The organizational structure of the library is designed very much along the lines advocated in an advisory report formulated by a group of library experts headed by Dr. Pinxter and nominated by the CAVIB, the State Universities Council's Advisory Committee for Library Affairs. The English translation of the summary of the said report, will be made available to you for your examination and comment.

We run the same number of library units, within the T.H.T., as there are faculties, complemented by the Central Library. The division of the various functions has been laid down in a brochure: "Bibliovisie" printed in 1969 and now under revision. Each of these libraries are headed by their own subject librarian, one who is both an expert in the subject(s) being taught and researched in the faculty itself as well as being a trained librarian. Further more, the staff of the faculty library is comprised of a library assistant whose responsibility it is, to fulfill all the further technical and clerical duties. The subject librarians are expected to act as intermediaries between the accumulated structured knowledge, on the one hand, and the range of users (both teaching staff and students) on the other. One of their responsibilities is the organization of courses so that staff and students are familiar with library operations and how they can tap the sources of information available to them. Staff and students also receive instruction in the operation of data bases and, despite the fact that our own experience is still somewhat limited, the training that the library can offer is very much appreciated and, as it increases, will no doubt lead us to fresh troubles due to shortage of library personnel.

The various faculty libraries hold the documentary materials (monographs and serials - including periodicals) pertaining to the special interest of the faculty itself. The Central Library (in our opinion, not what one would call the main library) affords the interested user the remainder of the literature available, provides for the student's own library, houses the circulation department, arranges inter-library loans and operates a readers advisory service (which we call the Reference and Bibliography section) whilst in the same Central Library building other logistic services are carried out such as, the acquisition section, the further processing and cataloguing section as well as the financial and accounting service. The university's librarian is the nominal head of all these libraries and services and it is this position which enables him to harmonise all operations and to take care that duplication is kept to a minimum and that services are maintained at an optimal standard, at least, that is what it is in theory. In order to ensure that a correct interface is maintained, parallel to the users wants, the separate faculty librarians are advised by small advisory bodies, the members of which being recruited from the teaching and research staff. The same thing applies to the Central Library in general, the advisory committee being composed of a different chairman of the separate faculty advisory boards, one or two students and some representatives of other university bodies. The chairman of the university's Board of Governors, Mr. A. Hooites Meursing, attends the meetings as an observer. Some other services are also represented on the advisory body. The distribution of available funds and the provision of reader services, including the previously mentioned training of students, are the main topics of discussion. This committee meets about six times a year .

The main aim of the library, is to provide a service. To this end, all of the library staff have had training in being generally helpful and never to be un-cooperative or negative which, in these days, can be a particular challenge in the light of the lack of financial means together with the scarcity of posts available. However, most of the library's users are not over-demanding (even if they are not fully satisfied) since they know, or can easily learn as to just what our limitations are as a result of the open policy structure carried out here.

The lay-out of the Central Library needs no explanation. Please feel free to wander around and see for yourself. The catalogue itself is still in card form and stored in cabinets - well known to you all - but will soon be replaced by C.O.M. fiches. The reader apparatus needed in conjunction with the fiches has already been ordered. We have estimated that we will be able to change over to the fiches system around October of the current year. Our possessions consist of some 130.000 volumes and which are complemented by somewhere in the region of 2.500 - 3.000 subscriptions to all kinds of journals. The greatest part of the collection is (still) housed within the various faculty libraries (each of these libraries comprising some 8 to 10.000 volumes as well as 3-400 journals, of which the current, as well as the back numbers, are kept). Of course, we

concentrate generalities, general bibliographies, encyclopaedia, multi-subject indices, review journals and the like, here in the Central Library. The same holds true for standards, statistics, government publications and so forth.

The literature itself, is partially housed in closed stacks but, the larger part of the collection, some 3/5, is readily accessible on open shelves. Roughly according to U.D.C.; we offer three catalogues: an author catalogue, a catalogue arranged according to class numbers (at the same time a shelf catalogue) and a subject catalogue, or to put it better, a catalogue arranged according to key words. All of these are, of course, in Dutch despite the fact that about 4/5 of our intake is of foreign, in particular, Anglo-Saxon, origin and is in the order of some 10.000 volumes per year - being the maximum amount that we can handle with a staff of 6-7 cataloguers within a total of 40 staff members occupying 37 positions, a number that, has to be reduced to 35 by 1980/81, which we consider impossible in light of the continuously changing circumstances, growing demands and the university's ambitions. We are, however, not complaining - only weeping, now and again, - particularly when we see that the provisions for the library (collection and premises) are not being put to their optimal use. It is our sincere belief that extra personnel could remedy the situation drastically and, upgrade the library's effectiveness and revenue in terms of literature consumption. I shall not dwell any longer on the library's present situation. The way it functions and its objectives are not so much different from those of other academic libraries. This somewhat depressing situation brings us to realize that we have to co-operate with other libraries and, it is for this reason, that we are represented on different regional and national bodies (not to mention international ones such as the IATUL, IFLA, LIBER, FID, POGSI and others), each of which are turning their attention to networking, co-operative acquisition, inter library lending, central cataloguing and the building up of Union catalogues, using automation as well as other means. The social image of libraries is of paramount importance and therefore, user behaviour studies, analysis of user needs and user training programmes demand our attention.

Before ending this short paper, which does not pretend to be anything other than a short introduction to this library - of which further details are described in the little brochure on display - I would like to draw your special attention to a video-programme which we have prepared and completed only very recently with the co-operation of the Centre for Didactic and Educational Research and, in particular, with its sub-division responsible for audio-visual productions. Due to this co-operation, we are now able to show you an adapted version with an English/Scottish speaking soundtrack. My friend, Robin Jeffrey, did the translation and presentation. The actors, amongst whom are Mr. Skaliks and Mr. Schoenmaker of the library staff, are Dutch. I hope that you will enjoy the film which deals with on-line literature search (a tape-slide presentation of the library will, hopefully, be ready by Friday next). The title of the video programme is called: "And -or - And Not".

COOPERATION AS A SOLUTION TO THE
PROBLEMS OF EUROPEAN COMMUNITY DOCUMENTATION

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Intergovernmental organisations (IGOs) such as the European Communities, OECD, NATO, the United Nations and its family of specialised agencies are essentially a twentieth century phenomenon largely created as a result of the impetus given to international cooperation by the experience of two world wars. During the postwar period IGOs have proliferated and have played an increasingly prominent part in the day to day life of the international community. Their fields of competence now embrace political, economic, social, military, technical, cultural and other areas of activity. In view of this diversity of interest and the range of the resources at their disposal both within the parent organisation and as a consequence of their privileged position vis-a-vis member governments, the publications that emanate from such organisations form a rich and authoritative source of data for academic specialists, research workers, industrialists and businessmen. However, despite their impeccable credentials it is still too often the case that reports and studies prepared or commissioned by such organisations go unnoticed or fail to attract the attention their contents deserve. This brief paper describes the modest cooperative efforts that are being employed in the United Kingdom in an attempt to stimulate increased and more efficient use of the resources made available by just one such intergovernmental organisation.

The organisation to which I refer is the European Communities, the effective exploitation of whose published output is made all the more necessary by that organisation's unique role in the legislative process of member countries. Typically, IGOs seek to encourage and promote harmonisation and coordination of policy by means of cooperation, the elaboration of international standards and the force of international opinion. They issue recommendations and adopt resolutions but these have no legal binding force. The main institutions of the European Communities, on the other hand, have been invested by the founding treaties with the power to make Community law which can, in defined areas, override and supersede existing national legislation. Membership of this supranational organisation has added a new dimension to the national legislative process in member countries and has generated a fresh body of legal and associated documentation whose bibliographical characteristics and potential as a source of authoritative information are less familiar but no less significant than the various series of publications that emanate from the governments of individual member states. In addition to this legislative documentation the European Communities, in common with most other IGOs, pursue a vigorous publications programme as a means of publicising their work and disseminating information gathered during the course of their activities.

One of the ways in which the European Communities seek to attract a wider audience for their publications is to grant the status of European Documentation Centre (EDC) to institutions of higher education whose teaching and research programmes would benefit from access to extensive collections of Community publications and documents. Since 1964 the Commission of the European Communities has created nearly two hundred EDCs in member countries

and more than fifty in other parts of the world. These documentation centres receive free of charge and in the official language of their choice, practically the full range of official publications produced by the European Communities together with a significant amount of documentation that would otherwise receive only limited distribution. The general aim is to foster European Studies as a subject in the curriculum of universities and other institutions of higher education on the assumption that this will in turn encourage the intellectual appreciation of the ideals embodied in the Treaty of Rome.

There are forty-five such European Documentation Centres in the United Kingdom almost all situated in either university or polytechnic libraries, all in receipt of essentially the same substantial range of publications, all facing broadly the same series of problems concerning the organisation and effective utilisation of resources. However, the surprising thing is that despite the communality of their interests and objectives there has until recently been virtually no liaison between EDCs, no forum for the exchange of experience or for the coordination of activities. The Commission has made tentative efforts in this direction but with little real commitment or effect. It has, for instance, arranged a number of national meetings of EDC librarians to provide an opportunity for the discussion of matters of mutual concern but these are too infrequent to be of more than passing value. It was resolved at the last meeting in October 1974 that such meetings would be annual; we are still awaiting the next meeting. It was also agreed at that meeting that the Commission would produce a regular newsletter for EDC librarians. Precisely three issues have appeared since 1974, each one shorter than the one before and then produced only with the generous assistance of the University Association for Contemporary European Studies. To date the evidence suggests that the Commission is more interested in the mechanics of distribution and supply than with what happens to the publications when they reach their destination.

Such are the bibliographical characteristics of the publications received from the European Communities, the organisational dilemmas posed by their receipt in large numbers and the traditional reluctance with which library users approach official publications that merely to ensure an uninterrupted supply of material is not enough to guarantee the effective use of EDC resources and the success of the EDC concept. In view of the Commission's reluctance to respond to these problems with positive central leadership, EDC librarians have themselves recently taken the initiative by establishing a framework within which they can work in concert towards improvements in the service they offer. In both the North of England and in the Midlands informal regional groups have been established in the past year or so with membership drawn from the various European Documentation Centres in the area. The Midlands regional group, of which I am convener, consists of librarians from about twelve EDCs and intends to meet about three or four times a year, visiting each constituent EDC in turn. The general aim is to provide a forum for the exchange of information, to facilitate and promote local cooperation and to act as a pressure group in support of improved bibliographical standards in Community publications and in support of the more efficient administration of the EDC scheme. There is already close cooperation between the two existing groups and there are plans for national coverage to be completed by the formation of a similar regional group in the South of England.

Although both regional groups are of very recent origin a number of cooperative projects are in train. A specific example from each of the general areas in which the groups are active will illustrate the ways in which they hope to make a significant, practical contribution to the day to day efficiency of participating EDCs.

Firstly, I will give you an example of group cooperation as a means of alleviating some of the problems associated with the bibliographical characteristics displayed by Community publications. EDC librarians, and indeed librarians who have a more casual acquaintance with Community publications, have long viewed with disquiet the European Communities' rather fickle recognition of generally accepted bibliographical standards in their publications. The tardy and spasmodic use of ISBNs and ISSNs; the poor quality and irregularly produced catalogues of publications; the frequent, and at times infuriatingly minor, changes of serial titles; the unannounced death of some serial titles, the divorce or marriage of others and the occasional birth, particularly among Eurostat serials, of what may legitimately be called bastard monographs all pose problems which are not in themselves insuperable but which collectively do nothing to dispel the documentation's reputation for complexity and inadequate bibliographical control. Of particular concern is the lack of any tradition of adequate subject indexing in Community publications. Such notable titles as the Official Journal of the European Communities and the General report on the activities of the European Communities contain a wealth of detailed information on a multitude of specific aspects of the Communities' work. The former possesses an alphabetical index and methodological table of arguable utility; the latter has a detailed contents list but no index. Convinced that easy access to the information contained in Community publications is equally as important as their original conception, completion and publication, EDC librarians in the Northern group have formed a working party to investigate the feasibility of local cooperative indexing. A thesaurus of terms has been compiled and tests are being conducted to discover its practical suitability. If trials are successful then individual EDCs will assume responsibility for using the thesaurus to index material in allocated subject areas. Taken together their contributions will hopefully provide a useful working tool until such time as the Commission can be persuaded of the absolute necessity for such important publications as the Official Journal to be provided with adequate subject and other indexes.

My second example is to do with cooperation as a tool for improving the routine administration of European Documentation Centres. Although the Office for Official Publications was established in 1969 with nominal responsibility for the sale and distribution of Community publications, institutions within the Community framework retain considerable autonomy with regard to their publications policy and practice. A considerable proportion of material still originates directly from, and is only obtainable from, main institutions such as the Commission of the European Communities and the European Parliament, from other institutions such as the Economic and Social Committee and the European Investment Bank and from departments and offices within these institutions. Consequently, the Commission's Directorate-General for Information, which has overall responsibility for EDC policy, has to depend on the goodwill and cooperation of other Directorates-General and of publishing outlets in other Community institutions for supplies of publications and documents in correct language editions to distribute to almost two hundred and fifty EDCs located throughout the world.

The decentralised nature of Community publishing imposes a tremendous strain on the coordinating resources of the Directorate-General for Information and is the source of many of the frustrations experienced by individual EDC librarians in their relations with the Commission. There have been, for instance, complaints about the fact that the multiplicity of mailing lists used to determine the distribution of material makes it just as likely that a library will receive two or no copies of an item as one and makes it difficult for librarians to decide from which source to claim missing parts. EDC librarians in the Midlands have addressed themselves to a related problem, the lack of regular and comprehensive checklists of material distributed to EDCs. The Commission has made occasional and sometimes contradictory state-

ments concerning the entitlement of EDCs to certain categories of material but always couched in rather general terms. What is required is a regular and detailed consolidated list of publications against which EDC librarians can check the comprehensiveness of their holdings. Consequently, the Midlands regional group is taking steps to compile its own unofficial entitlement list. Lists of serial titles received by each EDC are being compiled and compared so that gaps in the range of titles received by individual libraries can be identified and steps taken to fill them. Consideration is being given to the collation of a definitive list of serial titles and its transformation into a union list containing details of the holdings of participating libraries.

A third example of local cooperation concerns the fundamental organisational problems that designation of EDC status can create in a library whose procedures are not hospitable to the regular receipt of large quantities of official publications. The Commission is very definitely of the opinion that the documentation it makes available to European Documentation Centres is best exploited by its organisation as a separate collection together with associated material on European integration. Although the Commission makes separate treatment a condition of EDC status the reality in the United Kingdom is that librarians have never felt obliged to adhere to the letter of the law, although most do in fact observe its spirit. Despite the existence of a handful of libraries that follow an integrated approach the majority of British libraries recognise that the characteristics of the documentation are such that satisfactory solutions to the administrative and reader service problems they pose can be best found in the context of the special collection.

However, there is immense diversity in the detailed arrangements individual libraries have made for handling and exploiting material received from the European Communities. Take cataloguing for instance. Practices vary from the standard application of AACR to generate records for the main library catalogue at one extreme, to the replacement of library catalogues by printed catalogues of publications suitably marked to show local holdings at the other extreme, with numerous variations on the theme of separate catalogues based on simplified local cataloguing rules occupying the more populous middle ground. Equally varied classification policies include the use of general classification schemes, special schemes such as that devised by the Commission for the European Bibliography, local schemes based primarily on the principle of provenance and shelf arrangements that avoid the use of subject classification altogether. Although the priorities and requirements of the local situation must largely determine the nature of arrangements made for both the staffing and organisation of such collections it is safe to assume, I think, that many of the organisational problems encountered by EDC librarians are common to more than one institution and could be solved more effectively and economically by cooperative effort. Regional groups intend to seek optimum ways of handling and organising collections of Community documentation. To this end the Midlands group has decided to hold its meetings in each EDC in turn so that members can see how each library has responded to EDC status and learn from its experience. At some point in the near future it is hoped to consider the possibility of more ambitious projects such as the construction of a special classification scheme for European Documentation Centres.

Finally, as far as regional groups are concerned I should mention the newsletter compiled in the Northern group and circulated to members of both regional groups. An unpretentious newsheet which is the product, like all other regional group activities, of purely voluntary effort, it provides a valuable service as a means of communication between members. It acts as a vehicle for disseminating information about group activities, offers librarians the chance to request advice or pass on information to colleagues

in other institutions and contains miscellaneous snippets of information on new publications, Community news and so on.

No paper on cooperation in the field of European Communities publications would be complete without brief mention of two other developments that have recently occurred on a national level. The first concerns the actual exploitation of European Communities material in an academic library. I think it would be true to say that EDC librarians have in the past viewed their obligations primarily in terms of organisation rather than of exploitation. This can be clearly illustrated by looking at staffing arrangements made by host institutions to cope with EDC matters. Librarians have typically addressed themselves to organisational requirements, that is to say the staffing implications of handling the material, cataloguing, classifying, and processing it. Few libraries make any specific allocation of senior staff time for reader service activities as such. There is a tendency to forget that the separate collection is only a means to an end, the end being to maximise its use and the means being an arrangement which allows for a specialist to be interposed between reader and documentation.

However, now that most host institutions have given at least rudimentary organisation to their EDC collections there are signs of a shift towards better exploitation of the material, as witnessed by the numerous guides to EDC resources that have been produced in individual libraries. One of the most valuable products of cooperative action in this area has been the production by the University of Salford Library, in collaboration with the Universities of Lancaster and Dundee, of a tape/slide "Guide to European Community documents". This package, produced under the SCONUL programme of modular tape/slide guides to various library services, is an extremely professional production of excellent quality in terms of both content and presentation. It consists of one hundred and forty eight colour slides with a synchronised tape commentary of thirty five minutes length divided into three separate parts. It describes the organisation, aims and activities of the European Communities before presenting a detailed commentary on the various categories of publication and document received in European Documentation Centres. I extol the virtues of this production not because the Librarian of the University of Salford happens to be in the audience but because I think that the widespread purchase of this guide by librarians in the United Kingdom and abroad will give a welcome boost to user education programmes in an area into which readers have been traditionally reluctant to venture without persuasion and expert guidance.

My final comments are to do with a forthcoming development that may, and hopefully will, have a major impact upon the shape of Communities publishing in the future and help ease some of the problems referred to earlier in this paper. The library profession in the United Kingdom is, in common with most professions, conservative and slow-moving. However, it has gradually come to terms with the implications for the profession of the United Kingdom's membership of the European Communities. This awakening of interest has found expression, for example, in the organisation of a continuing series of short courses on Communities publications which have attracted a steady stream of librarians from all sectors of the profession. Indeed, these meetings have been instrumental in focusing the attention of the Library Association on the need for improvements in the standard of publications issued by the European Communities. As a result of opinions expressed at these meetings the Library Association has established a working party to investigate the situation and has invited the Commission to participate in its deliberations. The fact that the Commission, through its Consultative Committee on Publications, has agreed to send representatives from this autumn bodes well for the future. Experience has shown that a similar Library Association/HMSO working party has had a considerable impact on government publishing practices. It is to

be hoped that the new working party will provide the opportunity for meaningful discussions at a level that will allow professional opinion to be taken into account when policy decisions regarding publications are being taken within the Commission of the European Communities.

DISCUSSION

Mr. A.C. Bubb: The Library Association Working Party is aiming at the organization of documents or publications. Problems being dealt with by local groups should not arise in all cases if publications were better controlled.

Hopkins: I agree that local and national activities are complementary.

Mr. M.W. Hill: Is UK experience with the EDCs unique? What is the situation in the other member countries.

Mr. G.A. Hamel: We have not felt ourselves able to be bound by the rules that the Commission wished to impose.

Dr. D. Shaw: Are the EDCs supplied with all publications or just a selection in specialist fields?

Hopkins: As far as is known, all distributed literature is sent to all centres.

Shaw: Then, surely, most librarians will weed out those publications outside the broad interests of their institutions! This must apply particularly to research institutions.

Hopkins: There is no plan at present to select publications and send them to a specific centre. All EDCs are entitled to receive all European Community Documentation which is distributed.

Bubb: European Documentation Centres are set up possibly as information (even propaganda) centres. It was assumed that they would help to encourage European Studies and that documents would be retained.

Hamel: How do you actually operate the documentation centre? Do you obey the implied rules? Who uses the material?

Hopkins: Loughborough integrates the material into the rest of the material at the library. A special collection could help the better exploitation of this special material, and may allow the library to afford to pay a specialist to keep the material in good order.

COOPERATION AMONGST THE SCIENCE LIBRARIES AT OXFORD UNIVERSITY

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1. Summary

In a historical introduction which traces the development of the Radcliffe Library (1)* alongside the Bodleian Library (56) at Oxford it is shown how it took nearly two hundred years to establish a role for the Radcliffe as a science library. During this period, some of the science departments in the University of Oxford set up specialist libraries and from these beginnings has grown a very strong body of science departmental libraries. In spite of the richness and breadth of the literature collection in the University library nearly half of the scientific library resources in the University are devoted to supporting the departmental libraries. While some of these may, because of their unique holdings, be looked upon as specialist extensions of the main library, the majority of holdings duplicate the central collection. In order to ensure maximum inter-library cooperation, and in the hope that unnecessary duplication of stock and other library resources may be eliminated or avoided, a Science Libraries Advisory and Co-ordinating Committee (S.L.A.C.C.) has recently been established.

One important device to ensure the maximum benefit from the large collection of scientific serial publications (which includes all British publications deposited under the Copyright Acts) is the maintenance of a union catalogue which includes all holdings in fifty-four different science libraries (over 30,000 entries). To increase the effectiveness of this catalogue, an attempt is being made to set up the entries as a database on-line on a central computer. Those departments with terminals on the University computer network may be able to interrogate the catalogue by this means.

Experience in Oxford and elsewhere has shown that library automation is generally costly and difficult to justify on a cost-benefits analysis. The basic problem arises from the large databases which are accessed infrequently. One way of increasing their utilization is by sharing between several user libraries.

If this venture is successful it is hoped to extend the database to include detailed records of individual holdings, including lacunae. The addition of subscription data later on could lead to the development of an on-line automated serials handling system. Interest generated by these activities has led to the setting up of an inter-library working party to explore the feasibility of establishing a union list of scientific texts to include monographs and reports.

† The scientific department of the Bodleian Library.

* Numbers in brackets after the name of a library indicate that it is shown on the map of Oxford, Figure 1.

2. Historical introduction

The Radcliffe Science Library (1) was founded originally in 1749 as a result of a bequest by Dr. John Radcliffe, a physician at the court of Queen Anne. He left forty thousand pounds to build a library, one hundred pounds annually to purchase books and an annuity of one hundred and fifty pounds for the librarian.¹ At that time the Bodleian Library, refounded in 1598-1602, was flourishing and expanding steadily and much effort was expended on ways to put the Radcliffe bequest to best use for the University. The eventual solution which we see today was not implemented until one hundred and eighty years after Radcliffe's death.

In the year 1749 the Radcliffe Camera (55), one of the most renowned of Oxford buildings was completed and opened to house the Radcliffe Library and for nearly one hundred years it functioned next to the Bodleian Library as a general library with no clearly distinct objective. In 1811 the then Radcliffe Librarian, Dr. Williams, induced the trustees to restrict new purchases to scientific and medical subjects but it was not until 1860, one hundred and eleven years after its original foundation that the Radcliffe Library became firmly established as a science library. It was in this year that the scientific and medical books were transferred from the Radcliffe Camera to the University Museum in the Science Area. At the same time the trustees allowed the Bodleian Library to use the Camera as a reading room and provision was made for the Bodleian Curators to loan scientific books to the newly housed Radcliffe Library. The final act in this very early instance of scientific library cooperation occurred in 1927 when the Radcliffe Trustees gave the library and its books and endowments to Oxford University who placed it in the charge of the Bodleian Curators. The Curators responded by transferring all the post-1884 Bodleian works in Natural Science, Engineering, Mathematics and Medicine to the Radcliffe Library.²

3. The Oxford scientific community and library resources

In 1977, the author published *A review of Oxford University science libraries*.³ This report identified fifty-three science libraries located in the various science departments of the university (including fourteen in clinical medical subjects). A detailed study of the holdings of these libraries showed that eleven of them had significant collections of scientific literature not held in the main University Library (see Table I). The origin and role of these libraries is discussed by Morgan in *Oxford libraries outside the Bodleian*.⁴

The collection of data for entry in this table was greatly facilitated by the existence of a union catalogue of scientific serials in the University. This catalogue, which was published in hard copy format in 1971,⁵ has subsequently been maintained and up-dated in typed card format (5" x 3") and held in the Radcliffe Science Library.

The majority of the libraries in Table I are in relatively small biological science departments. Yet, in all cases they provide better coverage of their subjects than does the Radcliffe Science Library and their collections of literature are of vital importance for Oxford science. It is of interest to note that two of the listed departments support international bureaux - the Commonwealth Agricultural Economics Bureau (2) and the Commonwealth Forestry Bureau (19) - housed in the respective departments. The Alexander Library (29) supports the British Institute for Ornithology and the Cairns Library (12) supports clinical medicine for the Oxford region which serves a population of over two million.

The scientific community served by this group of libraries is large and

<u>DEPARTMENT</u>	<u>MAP KEY</u>	<u>NUMBER OF CURRENT SERIAL TITLES</u>	
		<u>Total subscriptions</u>	<u>Held only in department</u>
Agricultural Economics	2	778	293
Agricultural Science	3	238	22
Astrophysics	6	268	100
Botany	11	268	115
Ecology (Elton)	15	210	102
Entomology (Hope)	17	149	89
Forestry	19	940	218
Geography	20	219	12
Geology	21	153	82
Ornithology (Alexander)	29	326	150
Clinical Medicine (Cairns)	12	520	100
Total number of current science serials in Oxford which are not in RSL			<u>1,268</u>

FOR COMPARISON:

	<u>Total</u>	<u>Purchased</u>	<u>Copyright</u>
Radcliffe Science Library	9,000	2,500	6,500

Table I: Departmental libraries with important runs of science serials.

CATEGORY	NATURAL SCIENCE AND TECHNOLOGY	CLINICAL MEDICINE
Staff	450	400
Post-doctoral researchers	150	300
Students reading for science degrees	5,000	200
Total in residence	6,500	
Former readers	25,000	
Visitors and external readers	500	
Total	32,000	

Table II: The scientific community served by Oxford University libraries.

includes the various categories of scientists shown in Table II.

Besides provision for academic staff, post-doctoral research fellows and graduate students, the university libraries provide a reference collection for first-degree students. Circulation is generally restricted to senior staff. The needs of junior members are partly satisfied by the college libraries which are excluded from the present discussion; but their role in providing a large source, mainly of standard textbooks for degree courses, is vital and must not be overlooked.

In addition to the readership entered in Table II the Radcliffe Science Library, as a library of last resort, provides back-up to the British Library Lending Division and the United Kingdom Atomic Energy Authority whose Harwell and Culham research establishments are within twenty kilometres of Oxford. Other significant users of the Oxford science libraries are the Oxford Polytechnic, the Oxford English Dictionary whose science editors carry out their research in the Radcliffe Science Library bookstack, and the science abstracters from Learned Information who abstract all the European scientific theses (circa 20,000 per annum) donated to the library by foreign universities.

4. Communications: present and future

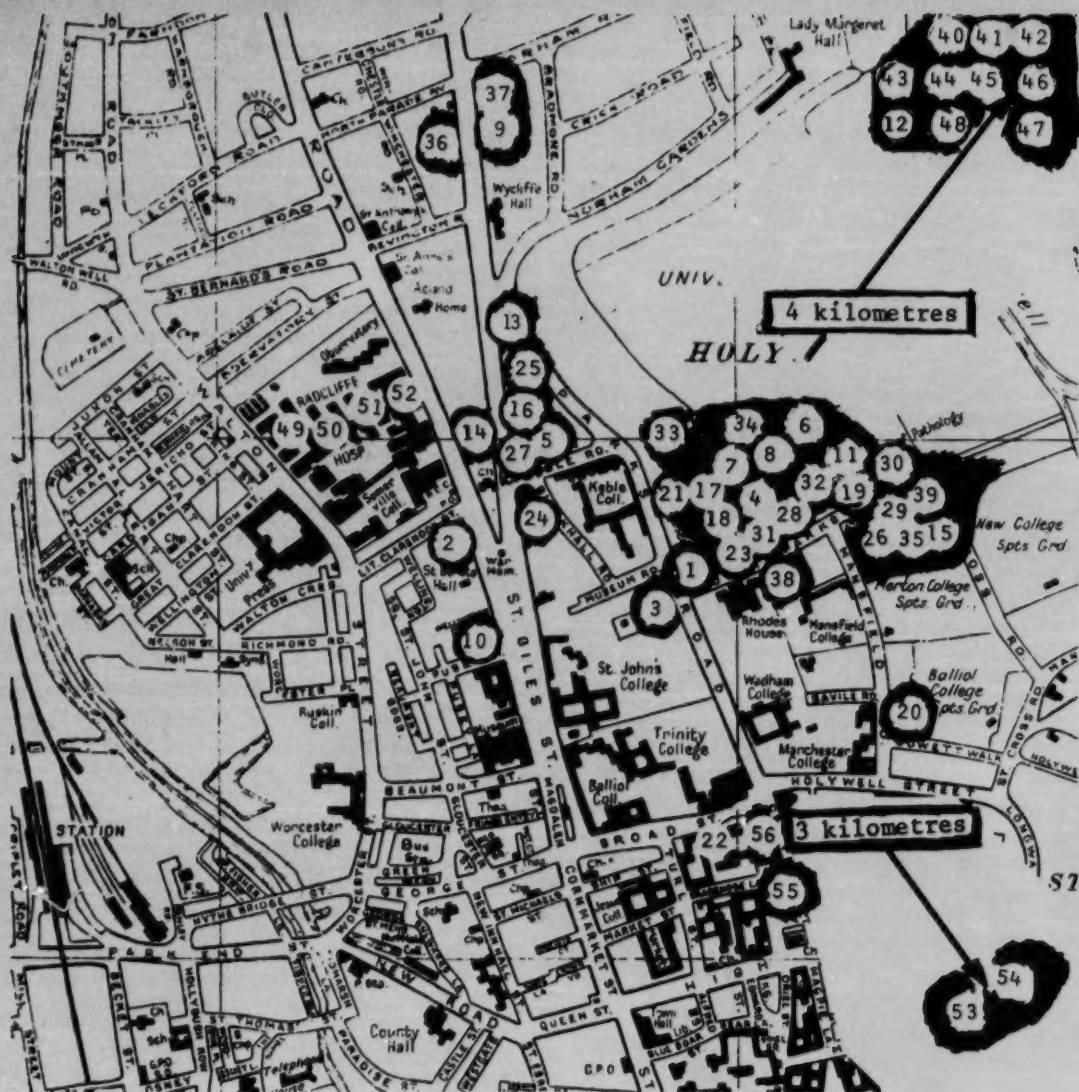
A map showing the geographical distribution of the science libraries is shown in figure 1 (see next page). It will be noted that the majority are clustered near to the Radcliffe Science Library and all except the libraries in the clinical medical departments are within a radius of one kilometre. The key to figure 1 which identifies the libraries marked on this map is given in Table III. Communications are good. All the central libraries share a common telephone service within the university network with internal direct dialling facilities between all telephone extensions using a six-digit number (three-digit code + three-digit extension number). There is a messenger service for letters and small packages with twice daily collections and deliveries and the Bodleian Library operates a van which travels twice daily around the central area and could be utilized for the delivery of parcels.

It is unlikely that the need for inter-library collaboration would carry much weight or influence towards the provision of new communications facilities - except for those which could be financed by the libraries from their existing resources. Therefore, it is essential to keep under scrutiny the provision for communications for other purposes within the university.

The university computing service supports a hard-wired communications network which is capable of signal transmission at 9600 baud. This network is primarily to connect remote terminals to the research computers in the main university computer building. There is a possibility that the system could be used for information transfer between libraries and it is important in this context that the Radcliffe Science Library has been included in the network. Finally, there have been discussions on a possible closed-circuit video link between the central science area and the clinical medical site at Headington. This has been suggested in connection with the teaching of anatomy and physiology to pre-clinical students aided by live transmissions from the clinical departments. The existence of such a facility would make possible facsimile transmission between libraries for information transfer and document exchange. This would be much faster and more effective than possible at present through the telecommunications network.

5. Collaboration: motives and objectives

More than ever before there is a competition for scarce resources. Whereas during the economic boom of the 1960s libraries were able to expand at will



SCALE: 0 1 2 1

KEY TO MAP:

Radcliffe Science Library	1
Radcliffe Camera	55
Bodleian Library	56
Cairns Library (Clinical Medicine)	12

The other libraries numbered on this map are listed and identified in Table III. For ease of reference, the key number to each library is also given in the text after it is first named.

Figure 1. Map of Central Oxford showing location of the Science Libraries, the Bodleian Library, and the Radcliffe Camera.

SCIENCE DEPARTMENTAL LIBRARIES

Science Area Departmental Libraries

Clinical Medical Libraries

	<u>Map Key</u>		<u>Map Key</u>
Radcliffe Science Library	1	Clinical Medicine (Cairns)	12
Agricultural Economics	2	Nuffield Institute for	40
Agricultural Science	3	Medical Research	
Anatomy (Human)	4	Paediatrics	41
Archaeology (Research Laboratory)	5	Obstetrics and Gynaecology	42
Astrophysics	6	Anaesthetics	43
Atmospheric Physics	7	Cardiovascular Medicine	44
Biochemistry	8	Clinical Biochemistry	45
Biological Anthropology	9	Clinical Medicine	46
Biomathematics	10	Pathology and Bacteriology	47
Botany School	11	Surgery	48
Computing Laboratory (Academic)	13	Clinical Pharmacology	49
Computing Laboratory (Service)	14	Neurology	50
Ecology	15	Ophthalmology	51
Engineering Science	16	Social and Community Medicine	52
Entomology	17	Clinical Psychiatry	53
Ethnology and Prehistory (Balfour Library)	18	Orthopaedic Surgery	54
Forestry	19		
Geography	20		
Geology and Mineralogy	21		
History of Science	22		
Inorganic Chemistry	23		
Mathematics	24		
Metallurgy and Science of Materials	25		
Molecular Biophysics	26		
Nuclear Physics	27		
Organic Chemistry	28		
Ornithology	29		
Pathology	30		
Pharmacology	31		
Physical Chemistry	32		
Physics	33		
Physiology	34		
Psychology (Experimental)	35		
Social Anthropology	36		
Surveying	37		
Theoretical Chemistry	38		
Zoology	39		

Table III: Key to major Science and Clinical Medical departmental libraries.

and, in fact, enjoyed a climate of financial support and well-being never experienced before, since then cuts in research funding have been accompanied by a very strict control over library budgets during the 1970s. The smaller libraries have generally been the first to experience problems but the economies forced on library managers have affected all of them. The severest cuts in financial support in the U.K. occurred during the years 1974-76 and for Oxford science libraries this was particularly unfortunate as it coincided with the time when, after ten years of planning, an extension to the Radcliffe Science Library was completed which virtually doubled the capacity and potential of the Library. Apart from any other considerations, therefore, inter-library collaboration is essential in order to make sure that priority is given to the most important aspects of library provision. This is the first objective and it is stimulated by a powerful motive.

The Radcliffe Science Library and the Science departmental libraries all receive financial support from central university sources but by different routes as shown in figure 2. The significance of the cross-link (S.L.A.C.C.) between the Libraries Board and the Science Departments is discussed below. In this context it is relevant to note that the financial expenditure of the departmental libraries is of the same order as that spent by the Radcliffe Science Library. This is demonstrated in Table IV which shows that the division of library funds between the science departments and the Radcliffe Science Library is roughly 40% to 60%. The departmental libraries are primarily concerned with the maintenance of core collections of periodicals and textbooks together with conference reports, preprints and reprints. They rely on the Radcliffe Science Library for major coverage of the world scientific literature; where this source is unable to meet their needs the scientists resort to the professional institutions in London and the British Library Lending Division.

6. Collaboration: means to an end

It has been postulated that the Scientific library service could be improved by achieving the following four objectives:

- 1 an increase in efficiency (whatever that may be in practice!),
- 2 the elimination of wastage and duplication,
- 3 the better utilization of existing stock, and
- 4 the implementation of agreed common objectives.

To achieve this degree of collaboration the University has set up a Science Libraries Advisory and Co-ordinating Committee, known as S.L.A.C.C., which reports to and advises both the Libraries Board and the Heads of Science Departments. The Committee has been in operation so far for just under one year. Even so, it has considered the following matters in a provisional survey of problems to be solved:

- (a) the creation and maintenance of a union catalogue of newly acquired monographs,
- (b) the updating and automation of the union catalogue of serials,
- (c) the sharing of bibliographic resources,
- (d) the disposal of obsolete or duplicate and unwanted material,
- (e) the conservation of unique (in Oxford) holdings, both of serials and

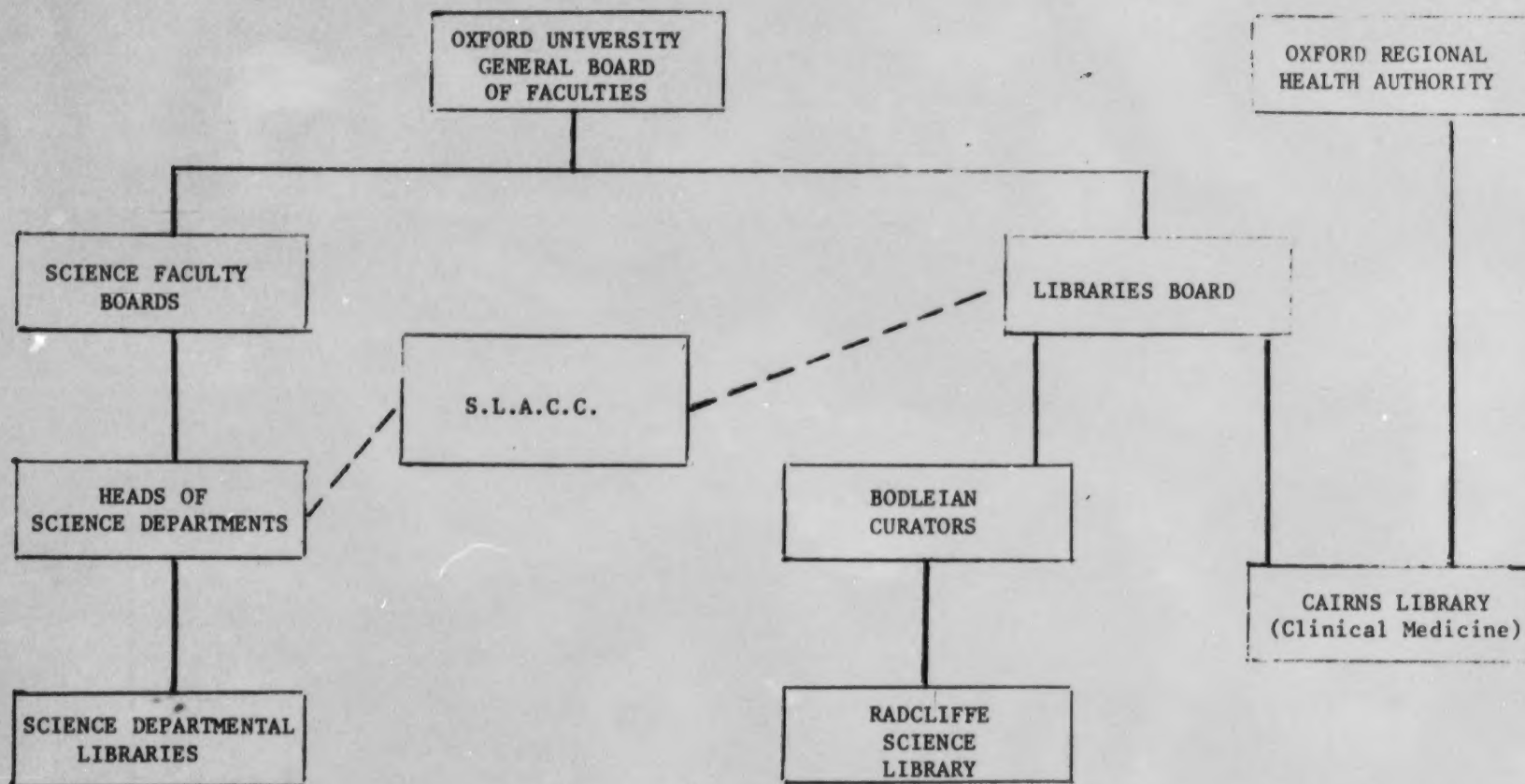


Figure 2. Diagram showing the source and routing of library finance with the cross-link S.L.A.C.C.

SCIENCE DEPARTMENTAL LIBRARIES

	<u>1971-72</u>	<u>1975-76</u>
1. Staff	44,300	80,700
2. Periodicals	30,800	64,300
3. Books	20,000	32,300
4. Miscellaneous	11,400	17,300
Total	£ 106,500	£ 194,600

RADCLIFFE SCIENCE LIBRARY

	<u>1971-72</u>	<u>1975-76</u>
1. Staff	58,200	118,800
2. Periodicals	54,600	109,100
3. Books	26,900	15,100
4. Miscellaneous	16,300	28,200
Total	£ 156,000	£ 271,200

Table IV: Expenditure of the Science Departmental Libraries compared with the Radcliffe Science Library.

monographs,

- (f) the application of the Atkinson⁶ principle for a steady-state self-renewing library of fixed storage space.

The majority membership of the committee is drawn from the science faculties but also includes five librarians, viz. Bodley's Librarian, the Keeper of Scientific Books, the Librarian/Co-ordinator for Clinical Medicine and two elected science librarians. The chairman is a head of a science laboratory. It is considered essential to have strong representation on the committee from the science departments; only in this way will the scientists be willing to cooperate in the necessary measures to ensure that their library resources are deployed to the best common advantage, particularly, when some measures may offer some of them an obvious disadvantage. The success of this new collaboration will depend on the extent to which solutions can be found or devised for the urgent problems and the speed with which these solutions are implemented. Scientists are busy people - as a scientist himself the author knows this - and they are the first to lose interest in and give up an unprofitable or unproductive enterprise.

7. Collaboration: the production of union catalogues

One of the most significant features of science library cooperation in Oxford has been the readiness of all departments to contribute to a union catalogue of serials. The original union list was planned by D.H. Boalch (Keeper of Scientific Books 1962-75) in three stages which have now been completed, viz:

- Stage I To list all current serials in the Radcliffe Science Library together with other Oxford holdings of science serials according to the World List of Scientific Periodicals^{7,8,9} and supplementary data recorded in the Radcliffe Science Library card catalogue. This was completed in 1968.
- Stage II To add to Stage I subsequent new serial titles received in the Radcliffe Science Library together with all serial titles, whether current or ceased, in 49 departmental libraries. This was completed and published in 1970 and comprised 15,000 entries.⁵
- Stage III To add to Stage II all ceased serials in the Radcliffe Science Library thereby completing the Oxford holdings of serials both current and ceased. The work on this was completed by Gill Cooper and Peter Warren in the summer of 1978 but has not yet been published. It comprises approximately 30,000 entries. The number of contributing libraries has been increased to 54.

Since the completion of Stage III, effort has been concentrated on devising economical means to publish the list. The records exist in two forms:

- (a) punched paper tape in separate lengths, one for each entry; these are used to produce
- (b) typed catalogue cards (5" x 3") which comprise the entries in the main serials catalogue which is located in the Radcliffe Science Library Entrance Hall.

Typical records are shown in figure 3, produced in May 1979 on a Friden Flexowriter. This shows clearly that the machine, now sixteen years old, is nearing the end of its life.

During the completion of the work for Stage III, developments in automatic

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1936- Ast.; 1966-73 (imp.) Nucl. Phys.; 1967- Metal.
RSL: 1905-1930 Per. 1996 d. 753; 1931- Phys. Per. 58;
2nd copy 1905- Gen. Per. 9

Figure 3. Examples of entries in the *Union Catalogue of Serials*.

data storage and retrieval systems have taken place which make the use of electronic data processing a possibility. The fact that the Flexowriter tapes are in a machine-readable code makes this approach the more attractive. However, in order to obtain hard copy output either by lineprinter or in microform, a substantial amount of data transcription and computer programming is required. The main reasons for this arose from the fact that the existing records were individually recorded on short tapes with stop codes, diacritical marks, underlinings and carriage returns, part of a special character set for the Friden Flexowriter which needed transcription after input to a computer.

It was, therefore, decided to carry out a comparison of production costs by four different production methods, viz:

- 1 photographing the card catalogue,
- 2 production of master hard-copy on the Flexowriter. (This method was used for the Stage II publication),
- 3 transcription of the Flexowriter tapes to a continuous magnetic tape,
- 4 keying in the entries *ab initio* on a computer terminal.

It was noted that methods 1 and 2 would enable only a book catalogue to be printed whereas 3 and 4 could serve both for hard copy and microform editions as well as providing input to an on-line database. The latter is important and has influenced our choice. A comparison of the relative costs of generating a computer database by methods 3 and 4 showed that the approximate cost per entry was £0.03p for tape transcription and £0.14p for re-entering the data from a keyboard. A more recent measurement using an intelligent-terminal keyboard with full-editing capability has given a cost per direct entry of £0.07p excluding allowance for revising. Hence, method 3 was chosen.

The work of transcription and input to generate a master magnetic tape file is now nearing completion. It has been carried out on a Digital Equipment PDP 10

computer in the Oxford Nuclear Physics Laboratory by the Librarian, Penny Gledhill. The histogram in figure 4 illustrates the rate of production

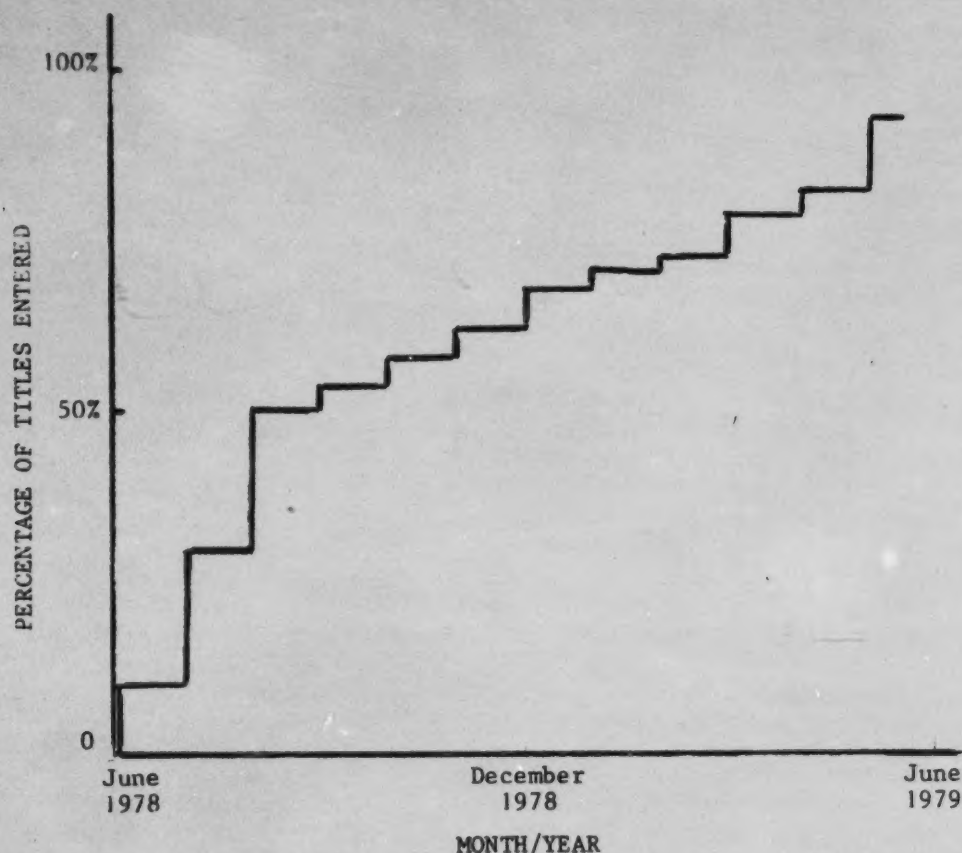


Figure 4. A histogram showing the rate of production of the magnetic tape file for the Union List of serials.

of the file. It has not been possible to maintain a steady throughput since this project is accorded low priority for use of the PDP 10 computer. The high rate of input during the initial period in the summer of 1978 coincided with the availability of extra labour at a time when the computer was not fully used. Nevertheless, over the year the rate of creation of the file has been fairly steady and it is hoped to complete this operation by the target date of 31st July 1979.

8. Conclusion

Following the interest generated by the setting up of S.L.A.C.C. and moves to provide multi-access to the union serials catalogue, a working group of librarians has started to explore the possible creation of a union catalogue of monographs. This is seen as a parallel project to the serials catalogue. The union list of serials enables the whole collection in the University to be supervised centrally to ensure that unique holdings are not disposed of. A union catalogue of monographs could similarly contribute towards the conservation of unique items in the departmental libraries.

It has been our experience that a very considerable staff effort is required in the initial stages of planning the nature of the entries, their extent and what to include (or exclude); consequently, the possible uses to which the final catalogue may be put must be explored thoroughly to ensure that the

effort involved in creating the database is justified.

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DISCUSSION

Mr. S. Westberg: In the 56 libraries that you studied, Dr. Shaw, at Oxford, what variations did you find with regard to availability to different groups of users?

Shaw: All of the libraries were set up for the benefit of the departments in which they were housed. The size spectrum varied over a factor of about a hundred. The largest library - forestry - is about one fifth the size of the Radcliffe Science Library whereas the smallest is a few metres of books. Access to the forestry library is completely open, whereas other libraries are restricted to staff in the department.

Westberg: What about provision of facilities for readers?

Shaw: About a quarter of the libraries provide seating accommodation up to UGC standards, but others have no seats or staff.

CONTRIBUTIONS TO THE THEORY OF INTEGRATION OF SPECIAL LIBRARIES

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A significant change in the trends of the process of library work and library policy of the Miskolc University Library /Eastern Hungary/ has been made towards the co-operation and integration from the year 1971 on. Significant co-operation has been realized on the following fields:

- The Hungarian adaptation of the METADEX /USA/ computerized metallurgical information system in the form of co-operation. /In 1979 we also start the operation of the system "World Aluminium Abstracts"./ Both services are of national importance.
- Regional chemical co-operation in order to secure the joint acquisition of the special literature. /The University and the four large chemical works of the region entered into contract in 1971 to acquire the extremely expensive chemical literature at least in one copy by sharing the expenses./
- Regional Translation Office started working in the library in 1974. /Yearly 60.000 pages of translation of special technical text is made for the university and the industrial firms of the region./

Very efficient work is going on on all the three above mentioned fields¹. From the practice of the past nearly 10 years principal and theoretical conclusions can also be drawn. A great part of these can be of international value, can express rules and that is why their publication is justified by professional reasons.

The identity of interests

The organizing and concentrating ability of the integration is based upon the identity of the interests. These interests however cannot be identified by a list of artificial and over-explained professional suggestions; they must be real interests originating from the real information needs of the production and research work. These really objective interests can be classified as "recognized interests".

The interests can be realized

- in financial advantages
- in achieving results that are individually impossible

- in joint acquisition and application of outstanding novelties in the field of information work
- the multiplication of the own individual performance by making use of the joint means of the partners taking part in the co-operation.

We can not only observe these basic relations but we have to take them into consideration as well since they are rules controlling the practice of the integration process. Some examples:

- Within the chemical co-operation the interests were extremely identical e.g. the acquisition of Gmelin's series of handbooks
- the identity of interests can be also seen in the co-ordinated subscription for the Chemical Abstracts and its Sections. From financial point of view this action was mutually advantageous.
- The acquisition of the retrospective indexes of the Chemical Abstracts for more than 50 years, that otherwise would have been impossible, was made easy by the joint financing.
- The adaptation of the METADEX in co-operation is a good example for the advantageous introduction of a promising novelty.
- This at the same time can be interpreted as a change in the quality of the information service of the library towards the metallurgical departments of the university.

The integration as an allied system

One of the basic criteria of the vitality of the integration is the continuous change according to the needs. We must not stop fighting against the static state since it shortens the life of the co-operation. As we could see, one or two points of mutual interests cannot be enough for a fruitful and useful co-operation. The team, organized in order to solve crucial problems, cannot live long if the threads connecting them are not strong enough; in this case sooner or later it becomes a monotonous everyday routine. The preservation of the vitality and even the development of the alliance can be achieved if all the partners wish the continuous renewal. New and new tasks must be always found which give the co-operation new tone and new impulses. Manifold interests and needs must be discovered and the beginning of their satisfaction must be begun without hesitation. In case if it is possible the integration must be developed into an alliance of the partners. It must be an alliance in which the partners' interdependence is manifold but the interdependence is based upon real interests. This must be always kept in mind because not all the items of co-operation is important unanimously for all the partners. If the number of the items is little, then the ties can easily get loose, on the other hand in case of a many branched tie the damage of the single branches from time to time does not endanger the bearing capacity of the complete tie. Previously I have mentioned all the methods and actions that are able to keep up the vitality of the integration. We must not forget however that the maintenance of the living process requires much energy and trouble.

The problem must be continuously treated, without longer breaks, in order to avoid its becoming stagnant. If however it is done, then a library is not able to participate in several co-operations of different types. In accordance with its size and possibilities the Miskolc university library can successfully participate in not more than three systems of integration.

The problem of equality

The elementary condition of the balance of the integration is the equal rights of the partners. The "co-ordinate" harmony is a logical consequence of and inseparable from the "allied" structure because the real equality belongs to the essence of this latter construction. The principle of equal rights must be fully realized and on a large scale. The correct thing is that the contributors have equal rights in the course of the consumption even if the degree of the contribution of the single partners is not the same. The partners joining the co-operation later must be authorized to exercise the same rights exercised by the founding members from the beginning. On this basis the information sources acquired from the common financial fund can be fully used also by those partners who can afford only smaller financial contributions. Those who join the "alliance" later can also use the formerly acquired information sources. E.g. in 1971, in the first year of the chemical co-operation the contribution of the different chemical works was as follows:

- BVK /Borsodi Vegyi Kombinát - Borsod Chemical Works/:
250.000.-Ft
- ÉMV /Északmagyarországi Vegyi Művek - North-Hungarian Chemical Works/: 350.000.-Ft
- TVK /Tiszai Vegyi Kombinát - Tisza Chemical Works/:
100.000.-Ft
- The TIFO /Tiszai Kőolajipari Vállalat - Tisza Crude Oil Refinery Company/ that joined the co-operation in 1978 can contribute only 100.000.-Ft to the fund though the other three participants contribute 200.000.-Ft to it each.

In spite of this fact the TIFO is authorized to use all the literary sources acquired since 1971 as an equal partner. The application of this principle is suggested by the law of the uneven development and by the different economic possibilities of the firms. The practice shows that there are companies which cannot easily afford to back the co-operation financially. In our example the TIFO was still being organized in 1978, the investments were going on and no production work was done. Among these circumstances the 100.000.-Ft offered by them clearly expressed their willingness to take part in the co-operation. In other cases the representatives of the participants, who generally are the heads of the information centers of the companies, are not authorized to increase the yearly sum of the company's contribution. These problems and problems like these must be taken into consideration and treated flexibly. The power of community is able to bring along the emancipation of the partners by being able to bring the partners of more

moderate means nearer to the others. If, in the course of our activities, we take no notice of these aspects tensions may emerge and the entering of new partners would become impossible. One proper example to show this danger is that it would be perfectly unreal to demand from the TIFO, which joined the co-operation only five years later, to pay the more than 1.000.000 Ft. the sum paid by the other partners at once. If however the TIFO, this young and just starting company can use the full material without discrimination, the valuable help the company gets will inspire it to contribute to the co-operation intensively. Perhaps the most delicate problem of the integration is that of the hegemony. Concerning this delicate problem many Hungarian experience, or rather bitter experience and failure can be seen and overcoming them is rather a difficult task. No hegemony can be mentioned in case of any partners. The integration is a community, association, alliance and a friendly professional club building the future because it firmly stands on the floor of equality. Of course one of the members should be in charge of organization and control of the co-operation. In case if it is possible this task must be undertaken by the partners changing each other from time-to-time, if however the control is exercised by one of the partners from the beginning, then that partner must honestly and tactfully treat the sensitivity of the community. From the nature of the integration it necessarily follows that all the steps of the integration cannot be equally advantageous for each partner. In certain cases we have to reduce our demands, in other cases another partner's needs or proposal must be given preference even if they differ from our own interests.

The problem of the right of decision

The basic principles, leading motives and financial aspects of the integration should be put down in a general contract signed by the highest authorities of the participants. It is practical and worth being keen on because several later difficulties can be eliminated with the help of the higher management of the participating firms. At the same time while formulating the contract we have to take care that the contract really should be general, i.e. the person or the lower organizational unit in charge of the realization of the contract could act independently. In other words the representatives of the partners should be authorized to decide within the frames of the governing principles. If it is not so, the operation of the organization is paralysed. It is impossible to work efficiently if we always have to wait for the final approval of the highest bosses in case of necessary and urgent decisions.

The ability to provide solid services

The more developed the co-operation is the greater significance the vitality of the services has. It is obvious that each partner is willing to narrow its own fields of activity only if he gets the means he needs quickly and surely within the frame of co-operation. This means that the needs of the partner must be satisfied accurately, quickly and cheaply. The satisfying of the needs must never be denied. If objective difficulties occur then the willingness to help must be expressed in a different way with the approval of the partner.

Personal factors

In the process of integration the subjective factors can be continuously felt. It is paradox but it is a sorrowful fact at the same time that though the integration is based upon objective needs and interests, its realization depends on subjective inclinations and moods to a great extent. The subjectivity can be already found at the value judgement of the integration, i.e. whether a professional manager realizes and accepts the objective necessity of the integration and is willing to follow that way.

The integration inspires to quality work

The integration also acts as a controlling force within the sphere of information. This control improves the quality and capacity of the services, and it is easy to prove it theoretically.

It is well known that a part of the integration is realized in the division of labour. This division of labour increases the chances of the concentration and it can be taken as a rule. In this way because of the division of labour and the concentration due to it great powers can be concentrated in the individual firms to do the appointed or voluntarily undertaken tasks. This possibility automatically includes the preliminary conditions of the better, high quality work.

Due to the common, coinciding interests of the integration the integration controls and favourably influences the rising of the work to a higher level. The integration encourages not only the introduction of new technologies and techniques but inspires the rising of the level of the quality of the traditional works as well; i.e. after the partner's undertaking the mutual obligations to do certain work phases and to achieve the proper results the professional reputation of the institutions and their own fairness make them do their best to fulfil their commitments.

The integration activates the reserves

The expansion of the integration of special libraries is desirable from the point of view of the improvement of the efficiency of the information service. Among all the elements and relations of the sphere of information the emphasis must be placed on the dynamics of the efficiency. Two further remarks however repeatedly must be made:

- a./ the improvement of the efficiency is convergent with the elementary conditions of the development of the Hungarian economy and society.
- b./ we are not in excess of the means encouraging the development.

The conclusion is obvious: the reserves must be found, exploited and activated. The reserves are of different types and here I mention only some of the most important ones.

Enourmous reserves are available if the labour is made a good use of; e.g. a quicker development of the national, centralized services would free hundreds of professional librarians at the cataloguing departments of different libraries; or the concentration and co-ordination of the diffuse documentation activity also would free labour. This latter measure would rationally influence the printing costs and capacities as well. The financial difficulties of the acquisition of periodicals would be also eased by a co-ordinated acquisition within the frame of co-operation. My personal opinion, is, that the majority of the conditions of development is readily available and we only have to find them. Finding them however is more difficult than to claim new millions.

The methodological value of integration

The members of the alliance /not the persons but the institutions/ are on different professional levels. The information centres of the large enterprises are rather efficient. This statement covers now the engineering sciences belonging to the special field, the information service, the contents of the work of the library and librarians and the complexity of all the above factors. In other words the professional preparedness required by the information supply is good. The situation is different however in case of those smaller enterprises where only one or two persons work in the field of information service. At working places like this the possibility of including all the information sources is obviously excluded. The first problem is that while the information centers that are independent organizational units have three or four engineers and special translators on their staffs, in case of smaller enterprises no specialists are in charge of the information service. The minimum staff is confined to the librarian/s/. But even the extending and renewal of the knowledge required to the professional librarianship is very difficult because simply there is no one on the spot to learn from.

The developed integration that is based upon a manifold binding among the partners creates excellent occasions to the streamlining of the the practical work. After the official meeting e.g. the librarian participants of the regional chemical co-operation often stay together in the Miskolc university library to discuss the actual important and difficult professional problems they have to face. The clients of the regional translation office also connect the arrangement of the translation affairs with the solution of other problems. The items of the co-operation can be found on a large scale, e.g. printing of catalogue cards, registration of periodicals, library furniture, acquisition of reference books etc. Professional consultations like this can be considered very useful working relations because they are spontaneous, aimed at solving real problems and because they deepen the inter-institutional co-operation.

The conflict between the integration and the sponsoring institution

The sponsoring organs of the university library, the university, and the higher authority, the ministry, do not unanimously back the library service towards outer persons or institutions.

The different initiatives for integration and undertaking different jobs are usually followed by distrust. In the course of our activities I myself got caught on this obstacle.

The problem is not a local one. My stopping some years ago was made credible and thought-provoking by the experience I have collected since that time. The university librarian trying to widen the usual limits of the information service, even towards the university, found obstacles everywhere. The university is against the developing of outer connections first of all because it is anxious about its own interests. It is afraid that the widening of the services to outer partners causes the falling of the standard of the services towards the sponsoring institution to a lower level. The availability of the information sources acquired from the university budget will be more limited because of the more intensive "outer" usage; capacities in the field of information service and other library services will stand at the disposal of outer clients in spite of the fact that there is a shortage of these services within the university itself; reprographical and other technical equipments wear out to enrich outer partners in a period when the university itself has also difficulties in streamlining its own equipments or buying new ones respectively.

Summarizing the above problems we can say that the university is afraid of the uncontrollable outflow of its own spiritual and financial means to strange spheres of interest. This suspicion is realized in reservations and sometimes it is expressed in the form of violent protest.

In the fight of the librarian and the sponsoring institution the librarian can be victorious only in case if he can definitely prove that way of integration he has chosen is extremely advantageous for the university as well. He has also to prove that the satisfying of the ever increasing integration needs of the university cannot be satisfied in another way.

No prove is good enough if it remains on verbal scale. At a technical university only the language of reality and the power of the facts can win the battle.

Here I want to mention the surplus of acquired material originating from the financial sources of the chemical co-operation; or the extremely quick translation service for the university /in case of necessity translation can be made within 24 hours/; or the high standard information provided by the METADEX system. All these examples unanimously prove the up-to-dateness and the usefulness of the information policy offered to the university.

Giving preference to the sponsoring institution, its representation and the services to it must always be present in the trends of the library policy and the value of the obtained advantages must be continuously proved. It will turn out that an efficient university management will back the integration and every really useful initiatives and efforts. Misleading statements and the emphasizing of pseudo-results must be avoided in the course of the realization of the integration.

XXX

The above described facts and problems come from our own experience but we were given a lot of valuable information and help by the IATUL and especially by its Scandinavian member-libraries.

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DISCUSSION

Slajpah: With relation to Dr. Zsiday's paper, I would like to describe the experiences about cooperation and coordination between the Central Technical Library Edward Kardelj in Ljubljana and 70 university and special technical libraries in the years 1968-1979. According to the Yugoslavian library law and the national standards for special libraries, the central university libraries have specific tasks with regard to the special libraries in coordination of the purchase of documents, and the provision of union catalogues and interlibrary lending.

INTERACTION OF ONLINE USERS

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The past decade or so has seen a rapid development of online information retrieval systems. This equally applies to the manufacture of a vast range of databases, host-computers, terminal equipment and the design of search programmes. In regard to the development of online systems, the cliché of an information explosion is perfectly valid. An inevitable consequence is that - today - searchers are buried under loads of paperwork giving all possible information on spinners, command languages, equipment etc. I could imagine that many are tempted to forget all about this documentation avalanche - though useful it may be - and have a word with a colleague who might be able to tell him 'the latest' in a few minutes. The user or operator of the information systems I would like to refer to as an agent acting to the customer - the end-user.

When talking shop, users will also find out that they have certain interests in common and would like that more effort be directed towards the solution of the following problems - to mention just a few.

- convince governments of the need of support on a national scale;
- convince postal authorities that telecommunication facilities should be improved on some points and certain tariffs be readjusted;
- urge spinners to modify their systems and install new databases of common interest;
- approach database manufacturers to modify the structure and extend the coverage of a particular database;
- contact European Community authorities with the aim to try and change certain parts of their EURONET plans.

Against the complexity of the information market and the many questions it gives rise to, it is not so surprising that in the past two years, several national, regional or disciplinary user groups were formed in 11 European countries and some 80 in the US. Also suppliers of online facilities (the Government, postal authorities and private industry) are showing considerable interest in the organisation of users.

Spinners and database producers are forming user groups, EURONET has its user forum and also CIDST is considering the formation of a group for user relations. Recently, the International Telecommunications User Group has been recognized by the international PTT organisation CCITT as a partner for a future dialogue on matters of mutual interest. Using my nationality as an excuse, I would like to illustrate certain developments by briefly sketching the history of our 'Netherlands Association of Users of Online Systems'. The whole thing started when, only four years ago, three members of the Dutch Online Mafia met at a Chemical Abstracts Symposium. One of them casually said that he had compared some tiny detail in a search in the ESA/IRS system with its brother in ORBIT from the SDC system. The other two performed a similar exercise and they agreed on having a meeting to exchange their experiences. At that meeting, it was decided that other online users would also be invited to discuss their findings.

I will spare you all the details of the long way we have had to go since

then: we now have a recognized, independent organisation with over 150 members, about 50 of which are from institutes. To my knowledge, 90% of the total membership are Dutch online users. Both NOBIN (the Netherlands Organization for Information Policy) and the Dutch PTT are associate members. Our Association publishes a bulletin (mostly monthly) highlighting news of special interest. Unfortunately, copies are only available to members; moreover, it's in Dutch! We, of course, did survey ourselves and we are planning another one. Each year, two general meetings are held. The last consisted of simultaneous sessions held by all our working groups. Members could just walk in and ask their questions.

The working groups held many other meetings and among the points discussed were:

- education and training;
- cost;
- evaluation of systems;
- evaluation of databases;
- comparison of search strategies;
- business information.

A new working group on data transmission will be formed in due course.

Now what has been accomplished so far. Our attitude towards the PTT has been one of cautious co-operation. Whatever we think of the role of the European PTT's, fact is that a large part of online access is now via their nodes. After the Dutch PTT had installed the online node to the American systems in Amsterdam in 1977, we put them under considerable pressure in regard to tariffs. The Netherlands still has one of the lowest tariffs for access to the USA and it is our impression that our talks with the authorities concerned have had some influence here. The PTT also consulted us when they extended their node with a 1200-baud facility and we co-operated with them at a large general fair on online systems. Recently, they asked our advice on the planned EURONET node. As far as the information industry is concerned, we succeeded in providing an access for several spinners enabling them to organise seminars so as to get user reactions. We are now considering the formation of user groups of specific systems or databases.

On a national level, we have taken part in discussions about national information policies, focal centres, tariff structures and document delivery systems. Some of our activities have been subsidized by various ministries, such as the demonstration of online systems on 11 terminals to an audience of about 1000 people at our National Library Conference last month.

The hard core of the On-line User Group is its working groups. The group on 'education and training' has now organized two general one-week online courses. These courses dealt with general online principles and not with any specific system. A spin-off of this activity is that we are now negotiating with various organizations to study the feasibility of setting up a permanent online training centre. The Government have already promised financial aid.

The working group on 'cost' collected material enabling us to choose between the 300 and 1200 baud and wrote a report on the advisability of running SDI profiles in-house, from an intermediary or online. The groups concerned with the evaluation of systems and databases have gathered a wealth of material, which is being reported in our bulletin.

Considering our activities, we feel that our members benefit considerably from such an exchange of information and ideas. A favourable aspect here is that both NOBIN and Dutch PTT are much more co-operative than similar organizations in other countries seem to be. A second major factor is that Holland

is a small country: distances are short, people attending our meetings generally know each other well and it is comparatively easy to get your expertise collated. Moreover, Holland was one of the first online-using countries in Europe so that we managed to build up a lot of expertise. But Holland is, of course, no exception here. There are several other groups in other countries doing a similar job. However, there is still quite a number of problems to be solved. In my opinion, a major difficulty is that technical progress is so very fast that it takes national and our own organisations longer and longer to absorb it and make use of it. Two examples may illustrate this situation. In Holland, VIEWDATA might be available in a couple of months from a technical point of view but it will take 4 to 5 years to create the organisational mechanism for it. In our own organizations, much has still to be done to ensure an optimum use of online systems by libraries and information services. Part of each online conference is devoted to a seemingly endless discussion on the theme 'the end-user behind the terminal' which, in my opinion, is slightly ridiculous because, in practice, the reverse is true. We are approaching the stage where each end-user will require two intermediaries - one to know him and his subject and the other to be conversant with the database and the software.

In two other problem areas we are still at the beginning. Quite a few organizations are now thinking of setting up internal databases, such as report series and library catalogues, online on their own computer facilities. We, in Unilever, have already partly done so and during this operation we discovered that we had probably followed a path of discovery already well trodden by others.

The second area is that, in my view, VIEWDATA and Teletext systems will affect our profession dramatically.

In both areas, user interaction and co-operation are very important indeed. Close contacts between users are, therefore, an essential element in the online world. However, numerous user problems are in fact of an international character and an exchange of experience at such a level is therefore very useful.

In this respect, EUSIDIC, the European Association of Information Services, has been active for over 10 years. This was the reason why representatives of various national users groups, meeting in London in December 1977, decided to ask EUSIDIC to act as their international umbrella. The EUSIDIC Council responded very favourably and nominated a working group for members of national user groups.

It will take some more time before we can expect any real results from this group, the more so because it is an international bunch of 'poor' people, who can meet only occasionally. Nevertheless, during its first year of existence we exchanged very useful information and agreed on mutual modes of communication. An agreement on a few general issues, especially with regard to EURONET, is taking shape. At the moment, we are considering to put forward certain suggestions to do some spadework in this field, which might be sponsored by EUSIDIC.

Effective communication channels between users, both nationally and internationally, will be essential to make an optimal use of the exciting possibilities created by the computer revolution. Acceptance by the end-users of library and information services will be determinative of the profitability of host-computers and of the size of the budgets of libraries and information departments. It is not uncommon in our profession to define possible needs of our end-users on the basis of the wisdom we pretend to possess as communication experts. We seem to consider libraries and information services as holy, ideal facilities and think that end-users do not use these services as

frequently as we think they should do. It may be time to step down from our ivory tower and spend more effort on pinpointing real needs of end-users, such as:

- efficient document delivery systems;
- critical evaluation of our sales product;
- better coverage of specific literature areas such as hard data and regional information.

The first step of this process will have to be an even closer co-operation between the groups of information processing people.

DISCUSSION

Mr. T.J. Tanzer: Mr. v.d. Wetheringh, I would like to ask you how many meetings per annum there are of the Netherlands On-line User Group?

Wetheringh: There are only two general meetings, but there are many working groups, some who meet as often as once a month, others less frequently.

CO-OPERATION AMONG ACADEMIC LIBRARIES IN NEW ZEALAND

P. Durey

Librarian, University of Auckland, New Zealand

New Zealand occupies an area approximately similar to that of the British Isles but supports a population of only 3 million people. It is geographically isolated and the nearest major neighbour, Australia, is over 1500 miles away. There are six universities, the largest of which is the University of Auckland. This has a library collection of about 800 000 volumes and the total holdings of university libraries in New Zealand are approximately 3 1/2 million volumes. The necessity for co-operation is obvious. Two bodies have played a major part in the organization of co-operative ventures. These are the National Library of New Zealand and the Standing Committee on Library Resources of the N.Z. Vice Chancellor's Committee. This last comprises the librarian and a member of the teaching staff from each university and representatives of the National Library and of the N.Z. Library Association. It was this body which four years ago took the initiative which led to the annual publication of N.Z. university library statistics. These were modelled on the Australian pattern and their compilation involves a considerable amount of co-operation which cannot be taken for granted - witness the fact that there are no similar publications for a number of other countries including the United Kingdom.

Acquisitions.

There has been some successful co-operation in the purchase of expensive sets and in the rationalisation of current periodical subscriptions. The National Library regularly circulates an "Expensive Materials Bulletin". This is in two parts - the first consists of items which have not so far been recorded as having been ordered by any N.Z. Library but which the National Library considers worthy of attention. The second part lists expensive items which have been ordered or received by libraries in New Zealand. These entries are indexed cumulatively and there is no doubt that this list can have an important influence on purchasing decisions in academic libraries. In addition the Trustees of the National Library have a fund from which each year grants-in-aid are made to other libraries towards the purchase of expensive items not otherwise held in New Zealand.

Co-operation over periodical purchases has been of two main kinds. Standing Committee has in the past organised surveys of subject fields, such as Mathematics, in order to determine N.Z. resources, to find gaps and if possible to come to agreement on

additional purchases. These surveys appear to have had a limited effect. More recently the National Library agreed to co-operate with the university libraries when rising periodical prices made it appear likely that local decisions could have important effects on national resources. The university libraries agreed to notify the National Library of any proposed periodical cancellations. The National Library agreed to review the effect of proposed cancellations and ask the subscribing library to reconsider its decision if this seemed desirable. If the decision was still in favour of cancellation the National Library agreed that it would, whenever possible, take up the subscription if it appeared that this would be in the national interest.

Inter-library loan.

There is a well established system of inter-library loan operated by the National Library (with some difficulty because of government imposed limitations on Staff). The National Library publishes on fiche a union list of serials and for monographs a union list on cards is maintained in Wellington. So far the National Library has not managed to find a solution to the embarrassment caused by libraries which report their accessions in machine readable form.

Automation.

Although there has been a considerable amount of talk among the National Library and the University libraries about the need for co-operation in automation very little has been achieved. I believe that this is mainly because the National Library has found it extremely difficult to obtain access to governmental computer resources and unfortunately there has been no national source of funding for pilot projects. There have been some small local projects, and there are signs that institutions which deliberately held back because it was hoped that national schemes could be developed, will develop local systems because of dissatisfaction with lack of progress at the centre.

Library Staff.

One important area of co-operation which can get overlooked is the arrangement of regular meetings of librarians of various grades and interests to discuss matters of common concern. In N.Z. the university librarians themselves meet twice each year and there are also regular meetings of other members of university library staff such as reference and medical librarians. I think it is particularly important that others beside the chief librarian should be given the chance to participate in meetings of this kind. A major goal in co-operation should be the improvement in communication between institutions at a variety of levels.

DISCUSSION

Mrs. E. Törnudd: Mr Durey, the isolation of New Zealand seems to be a great problem. Have you easy access to data transmission networks to say California or Australia?

Durey: No, our local telephone system does not cater properly for data calls.

THE DEVELOPMENT OF DOCLINE - AN INTERLIBRARY LENDING LINK BETWEEN THE BLLD AND CHALMERS UNIVERSITY LIBRARY

Sven Westberg, Librarian

Nancy Fjällbrant, Deputy Librarian

The Library, Chalmers University of Technology, Gothenburg, Sweden

Introduction

No library can be totally self-sufficient in supplying the information needs of its user community. This is particularly apparent in scientific and technological university libraries, where the present size and rate of growth of information makes it practically impossible to maintain complete collections even with respect to the research being carried on at the university. This has led to a sharing of resources through interlibrary lending - one of the best examples of national and international library cooperation.

The aim of this paper is to describe an attempt to improve interlibrary lending services at Chalmers University of Technology Library, Gothenburg, with respect to satisfaction rate, speed and decreased costs, by the establishment of a computer-based link to the BLLD for the transmission of interlibrary requests.

Interlibrary lending in Sweden

In Sweden, the academic libraries developed an informal co-operative network for resource sharing. This network gradually extended to include the public libraries and specialized industrial libraries.¹ Interlibrary lending networks of this kind are usually based on union catalogues of periodicals and national acquisition catalogues of monograph literature. Attempts are often made to increase cost effectiveness through cooperative acquisition policies where responsibility is divided between the cooperating libraries for holding literature covering different subject areas/ regions/ languages. The Swedish interlibrary lending network followed this pattern - based on the use of the Swedish Union Catalogue for Foreign Acquisitions, first published in the 1880s, and a number of Swedish and Scandinavian Union Lists of periodicals. Literature acquisition costs were partially shared according to the Scandinavian cooperative acquisition plan - "The Scandia Plan" - with special committees for different types of library.^{2 3} The development of the computerized EDP-system - LIBRIS, Library Information System -for the Swedish research libraries produced a useful localization tool - the on-line union catalogue for those libraries participating in the system.⁴

This Swedish interlibrary network, with its Scandinavian extensions, formed the basis for the interlibrary lending at Chalmers University of Technology Library.

Criteria for interlibrary lending

The three main criteria for an interlibrary lending system are speed, satisfaction rate and costs. With an interlending network of the Swedish kind, a loan request, which cannot be met out of the library's own holdings is sent to another library which one knows or hopes possesses the material requested. At present, there is no possibility of knowing at the requesting library whether, or not, the requested document is out on loan. This introduces a factor of uncertainty with possible delay, increased handling and cost.

There are two main types of literature that form the basis of interlibrary loan requests - high frequency material and peripheral low frequency literature. Line has pointed out that the greatest demand for interlibrary loan falls into the first category.⁵ Requests for high frequency use material in a traditional multi-library cooperative are likely to be met with the information that the documents are out on loan. This results in low satisfaction rate, slowness and increased handling costs. In those cases where the document is available, this is sent to the requesting library, which in turn, informs the borrower. In this case at least four days are spent on postal communication.

The development of the DOCLINE link

At Chalmers Library, which serves both university users and borrowers from industrial firms, especially those in western and central Sweden, it was decided to try to speed up document delivery and reduce interlending handling and costs. First, lending of high frequency use material - journals and certain report series was severely limited. At the same time photocopying facilities were greatly increased - to help local users to obtain copies at very low prices. This resulted in more material available in the library so that many local and inter-library requests could be met directly. Second, it was decided to increase lending from the British Library Lending Division, BLLD, a library which has extensive resources and is specially designed for interlibrary lending.⁶

A computerized link system was developed, DOCLINE, in cooperation between the BLLD, and the MEDICINDATA department at Gothenburg University and Chalmers Library, to transmit requests and information about availability. The BLLD has equipment which allows the connection of a printer to a distant computer. A set of computer programs were developed at MEDICINDATA in Gothenburg for their DEC 10 computer.

The interlibrary lending operator at Chalmers Library dials the computer, before 11.30

a.m. every working day, in order to connect the time-sharing terminal to the computer and input those requests that cannot be met from Chalmer's own holdings. These requests are then printed out on standard loan forms on the BLLD printer, copies are taken, and these are dispatched directly to the borrower. In those cases where the BLLD cannot supply the request, information is sent back, via the computer, to Chalmers Library.

Programmes in the DOCLINE system

The following programmes are used in the DOCLINE system:

(For detailed description of these programmes see ⁷⁾)

1) REQUEST programme

The REQUEST programme is run by the interlending operator to input requests which are to be transferred to BLLD. The requests are stored in a request file in the computer. The file is automatically assigned a name of the form "yymmdd. REQ", where yymmdd is the date of the day. When input is finished, the file can be printed by the BLLD (CUTPRT programme). When printed by the BLLD, the file is, as a confirmation, automatically renamed "yymmdd. CON".

It is possible to check if the BLLD has printed the request file for a specific day by using the monitor command

DIRECT yymmdd.x

The computer will then print the name of the file for that day.

If the extension is "CON" (e.g. yymmdd.CON) BLLD has printed the file. Extension "REQ" means that the requests have not been taken by the BLLD.

Each request is assigned a request number of the form:

ccc-yymmdd-xxxx

where

ccc is user code

yymmdd is date of the day for input

xxxx is a sequence number of 1 to 4 digits which should be unique within the year and consecutive from one day to the next.

A request contains the following information:

REFERENCE: Max 30 characters of reference.

TITLE: Max 11 lines of 40 characters of title information.

ADDRESS: Max 6 lines of 3 characters of address information.

Frequent addresses can be stored in the computer. Input of addresses are also carried out with the REQUEST programme.

Before the request file is made available for the BLLD, the user can print the file to obtain documentation of the requests.

2) NOFILL programme

The NOFILL programme is run by the interlending operator at Chalmers to print nofills, i.e. requests that the BLLD has not been able to supply. Information on these nofills are input by the BLLD with the CUTNOF programme.

The information is stored in the computer in a disk file with the name NOFILL.NOF. When run, the NOFILL programme looks for this file and if found, the requests are printed together with a message that explains the reason for nofill. When printed, the file is renamed to yymmdd.Nxx, where xx is a sequential number within the day. The NOFILL programme can be run at any time and more than once a day.

The NOFILL files are renamed and saved for statistical reasons.

3) CUTPRT programme

The CUTPRT programme is run by the BLLD to print requests on standard forms.

When started, the programme checks if the user (the requesting library) has finished the input for the day. If not, the operator is informed that the file is being modified and asked to try later on.

If for some reason, for instance a paper jam, the operator wants to interrupt the printing, two CTRL C should be typed.

4) CUTNOFILL PROGRAMME

The CUTNOFILL programme is run by the BLLD to input information about requests that could not be fulfilled. The programme can be run at any time, except when the nofills are being printed by the user. The operator is, in this case, asked to try later on.

The systems contains the following files:

Request file

Nofill file

Address file

For details of the organization of these files see ⁷.

REQUEST: CUT-790302-0173

REFERENCE: CG 174 790219

SEN'I KOBUNSHI ZAIRYO KENKYUSHO
KENKYU HAPPYOKAI SANKO SHIRYO
52(1977)
PP 87-96 NAKANISHI, H
ONLY THE ENGLISH TRANSLATION IS
WANTED
CA 90:02, 006706Q

BEROL KEMI AB
BIBLIOTEKET
S-444 00 STENUNGSUND
SWEDEN

Fig. 1. Example of a request printout.

CUT-790703-1102	
4-Jul-79 CUT	
JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY VOL 29 1979 NO 1 P 56-67 WILKINSON, T G ET AL	
BEROL KEMI AB BIBLIOTEKET S-444 00 STENUNGSUND SWEDEN	
INTERNATIONAL TELEX PAYMENT COPY	
ISSUED AS LOAN	
ISSUED AS RETENTION FICHE	
NUMBER OF PAGES OF ORIGINAL ISSUED AS PHOTOCOPY	12
NUMBER OF PAGES OF ORIGINAL ISSUED AS MICROFILM	
CUT-790703-1102 KK 502 790701	

Fig. 2. Printout on a BLLD standard form.

REQUEST: CUT-790215-0028

REFERENCE: L-U NILSSON 56891 PV KA 790212

AUTO-ZEITUNG NR 24 1977
ARTICLE DEALING WITH "AERODYNAMICS"

AB VOLVO
BIBLIOTEKET
S-405 08 GOETEBORG
SWEDEN

REASON: TNI

Fig. 3. Example of a NOFILL printout.

DOCLINE operation

The DOCLINE system has been in trial operation since February 15th 1979. After two months it appears to be running smoothly. During this trial period all industrial requests for non-Scandinavian journal articles, reports, conference papers, plus a number of requests from academic staff and research workers have been sent to the BLLD. The average number of requests per month has been 230 items. The BLLD have been able to supply 70 % of these requests. In those cases where copies can be supplied, fifty per cent are dealt with the same day as they arrive. The copies are sent by first class mail directly to the borrower and not via Chalmers library.

Discussion

Service to interlibrary borrowers, at Chalmers University Library, has been improved with respect to both satisfaction rate and speed. Satisfaction rate for all incoming interlibrary requests is now 80 %, photocopies or loans are dispatched within 24 hours. Of the requests for journal articles and conference papers sent to the BLLD from Chalmers, 70 % are available and distributed in photocopy form direct to the user within one or two days. Handling routines have been simplified, and costs reduced, in that all requests from industrial users are treated in the same way.

It is hoped to carry out a detailed evaluation of the DOCLINE interlibrary lending system, with regard to satisfaction rate, speed and cost. Preliminary observations indicate that the BLLD back-up system will enable Chalmers Library to provide an effective interlibrary lending service for industrial and university users.

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DISCUSSION

Mr. L. Gärdvall: Could this link be used by other libraries?

Fjällbrant: Yes, other libraries connected to SCANNET could use this system.

Prof. A.J. Evans: With regard to satisfaction from the British Library what kind of material is hard to obtain?

Fjällbrant: Many of the items which are no-fills material that has not yet been received by the BLLD.

Dr. D. Shaw: I believe that Swets & Zeitlingers' comprehensive database could provide valuable information on not yet published serial parts. Could this be linked to DOCLINE to eliminate abortive requests for items not yet delivered?

Mr. J. Nouwen: The Swets special service, at present, covers about 30,000 titles. We would like to have a subscription for every serial publication in order to know all about all titles. But this is too costly at the moment. Swets is trying to extend the coverage of titles and we aim to reach eventually 65,000.

Mr. J.E. Skipper: Are there standards for bibliographic verification for Swedish loan requests?

Westberg: Yes, but smaller libraries may not have resources for tools for adequate bibliographic verification.

Mr. G.A. Hamel: Two observations: First - Holland has some 4 union catalogues operating separately from one another. The procedure is rather slow. The satisfaction rate is about 75-80 %. The applicant receives a positive answer and is satisfied within 10-20 days. Request forms continue to circulate unless the applicant stops the circulation process, but he does not know what stage his request has reached in the system. Secondly - any union catalogue whatever its structure (computer-based or manual) is as reliable as the individual participants both with regard to input and output.

Mr. P. Durey: Is there not a risk in relying on an international system? Are you trying to improve the Swedish system?

Fjällbrant: We hope that LIBRIS will help us in improving the operation of interlibrary lending within Sweden.

THE ROLE OF THE SAIDC SYSTEM IN ESTABLISHING THE AUTOMATED LIBRARY INFORMATION NETWORK IN SLOVENIA (YUGOSLAVIA)

Mara Slajpah

Professor, Central Technical Library, University in Ljubljana, Yugoslavia

One of the most important purposes of introducing automation into libraries according to uniform principles and by using uniform formats is an easy exchange of information of library's documents on computer readable media. Introducing computers to documentation services has as its major purpose transmission of SDI and retrospective information to the users, especially through articles as a primary source of scientific and technical information.

In Yugoslavia there exists a plan to establish a cooperative library information system¹⁾, which would interconnect each library with others, including those with documentation services, by terminal and computers. The aim of such a system is the exchange of information on library documents. For this purpose automation has gradually been introduced to libraries and documentation services. However, it has already become obvious that library automated networks are being formed at the level of republics. The visits and recommendations of two UNISIST experts, Mr. B. Tell and Mr. F. Kilgour, in the year of 1972 and 1975 respectively, were especially encouraging experiences for Yugoslavia. Prior to the visits of the UNISIST experts to Slovenia, one of Yugoslavia's six republics which is located in the north of the country, there existed a trend that was somewhat different than in many European countries. When initially introducing automation around the year of 1969 the documentalists demonstrated more understanding and initiative than librarians did - the majority of the latter wanted to preserve the traditional way of working, however, those librarians who took their postgraduate study in informatics at the University of Zagreb soon joined the documentalists. Since 1969 when the Republic Data Center was founded in Slovenia the first system for documentation data processing, named SAIDC, started developing.²⁾ SAIDC, that means System for Automation of Information/Documentation Centres.

SAIDC is based on the indexing of information with the help of a computer. The programs are developed for the processing of articles, books, patent texts and standards. For automatic processing it is necessary to fill in a uniform input document. The result of computer processing is a bulletin (which 4 reviews, i.e. indexes), SDI information and

retrospective information. Using the same programs it is possible to elaborate an author's and title's catalogue of monographs. (The SAIDC system also enables automatic translation of descriptors to other languages.) The programs were developed for CDC 3300 computer.

By processing all of the above mentioned documents and especially articles - as computers were first applied in connection with these - the broadest information basis for monographs, serials and standards in the form of union catalogues will be formed at the computer centers located at the university or at the republic research community in each of the 6 republics, where the entire information basis will be used as the source of SDI information and retrospective information. (At the same time, the libraries in this way also form their own data basis). We presume that as a consequence of this the automation in libraries was stopped at the point of the automated processing of monographs, serials and other documents and the computer software programs were not developed for the other working procedures in the library such as: access, lending, interlibrary lending etc. As large new libraries are being planned and constructed this problem is becoming more and more urgent.

Bibliographical descriptions for books (monographs) have 9 elements (author or authors, subject title, editor, place, institution /for collected work of papers and similar/, number of pages, inventory number, call number and language in which the work is written. Each element has a pre-existing limit to the number of signs. Bibliographical descriptions for articles have 13 elements, for patent texts 8, for standards 8. An ISBD/M has 23 elements. It should be mentioned that with the help of SAIDC it is possible to find each monograph; but the SAIDC in its present form is unsuitable as a computer entry system for a national bibliography because such important elements as book series, edition, supplements etc. are missing.

During the first years of SAIDC there was hope that it would also be used in the other republics of Yugoslavia as a computer software product package. This goal was never realized due to the delivery and installation of different computers. Nevertheless, it was agreed upon by all national libraries that all monographs, serials and other documents would be catalogued according to ISBD/M, ISBD/S, ISBD/G etc. in preparation for processing of national bibliographies; the agreement has already been put into practice. Taking into account the needs of the national bibliographies as well as library catalogues, the process of adjusting the SAIDC system³⁾ to the international communication formats of machinereadable bibliographical descriptions: UBC/UNIMARC and UNISIST/RM is already under way (Reference Manual for machine-readable bibliographical descriptions).

Regarding the documents from the field of technical and natural sciences, it is absolutely necessary to frequently use foreign literature above all that written in world-

wide languages, as Yugoslavia is a community of smaller nations. Due to this fact a supply of important magnetic tapes such as COMPENDEX, CAC CHEMICAL ABSTRACTS, ISMEC, INIS, INPADOC, RB /Informationsverbundszentrum Raum und Bau/etc. was obtained for distribution of SDI information, which is now provided by the above mentioned computer centers. Information Center of the Research Community of Slovenia, for example, provides as a service SDI information on patents from the magnetic tape INPADOC on which also data about patent Yugoslav texts are entered - for Yugoslavia.

In order to introduce order and planning into various attempts at automation in the republics, the Research Communities of the 6 republics passed an agreement about the processing of scientific and technical information. The signers of this agreement - republic research communities should, according to this agreement, secure the development of a system for scientific information processing with the help of corresponding specialized centers, which are as a rule composed of a documentation service, an electronic computer center and a library. Some of the centers are already active; e.g. for biomedicine, mechanics, civil engineering, chemistry, chemical technology and biotechnics. For information retrieval from various data bases the Republic Data Center in Ljubljana has developed the DORS system.

But in the libraries of the 4 republics the computer succeeded best at combining union catalogues, especially serials. Dr. F.G. Kilgour has often stressed and also written that by means of the union catalogue the resources in all the nation's libraries are together becoming a national library. In Slovenia the drive for the publication of a union catalogue of serials has been led since 1972 by the Central Technical Library of the University Edvard Kardelj in Ljubljana. Due to the increasing amount of SDI information containing mainly cited articles the need for union catalogues of serials is also increasing. The preparatory work for the Central Technical Library edition of serials is also interesting because it was facilitated by the experience of the consulting service which the Central Technical Library has been providing for over a decade to university technical libraries and special libraries in Slovenia, and because it has had continuous contact with the libraries and also offers them - among others - professional assistance with the arrangement of their documents. Consequently, the technical libraries which participated in arranging the union catalogue of serials from the field of technical and natural sciences in the libraries of Slovenia, are relatively well organized. Sixty-five libraries have participated in the development of the union catalogue which lists more than 13.000 serials (titles).

SAIDC has become obsolete in spite of the changes and improvements made to it. However, it has provided the first experiences with the automation of libraries and documentation centers to the interested librarians and documentalists. According to

described course of libraries automation, which followed the automation of documentation services, a close connection developed between libraries and documentation services, this in spite of initial friction between librarians and documentalists. Over 100.000 pieces of data have been transferred to magnetic tapes - 80% of it articles. The main hindrance to connecting of automated libraries and documentation centers into an automated network are staff and the insufficient equipment of libraries.

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LIBRARY COOPERATION IN INDIA: PRESENT STATUS AND FUTURE NEEDS

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The establishment by the Government of India of the Indian National Scientific Documentation Centres (INSDOC) as a National centre for dissemination of scientific information was the first organised effort towards library cooperation in the country. Considering the area to be served, in 1964 a regional centre of the INSDOC was established at Bangalore and another in Madras recently. Others at Bombay and Calcutta are planned. Also, National centres in specific disciplines, under the auspices of different Ministries and Agencies are also functioning, for example the Library and Information Centre of the Bhabha Atomic Research Centre, the Defence Scientific Information and Documentation Centre (DESIDOC), the National Medical Library, the Standards Information Centre, the Small Enterprises National Documentation Centre (SENDOC), the Social Sciences Documentation Centre and the National Information Centre of the Electronic Commission which is planned as a computer-based Data service. The National Science Press, the National Agricultural Library and the National Patent Information Centre are also being developed.

The need for co-ordinating and integrating the various centres for providing better services was felt and the Government of India included in its Science and Technology Plan proposals for the establishment and development of the National Information System for Science and Technology (NISSAT). This was presented at the first UNISIST meeting of Experts at Colombo, Sri Lanka, in December 1974. The Department of Science and Technology (DST) of the Government of India is the UNISIST Focal Point for India and has the responsibility for the implementation of the NISSAT and for linking it up with other co-ordinate systems in the country.

The DST encourages and supports a few existing information centres to serve as Branch Information Centres (BIC) in a particular discipline/ industry. BICs in the following areas have been established:

- | | |
|---------------------------|---|
| 1. Machine Tools | - Central Machines Tools Institute, Bangalore |
| 2. Aeronautics | - National Aeronautical Laboratory, Bangalore |
| 3. Scientific Instruments | - Central Scientific Instruments Organisation, Chandigarh |

4. Food Technology - Central Food Technology Research Institute, Mysore
5. Leather Technology - Central Leather Research Institute, Madras
6. Drugs - Central Drug Research Institute, Lucknow

Besides the above, BICs in Metallurgy, Electrochemistry, Essential Oils and Aromatic Chemicals, Wood Science and Technology, Raw Materials and Industrial Products, Science Policy Studies, Environmental Studies and Patents are being developed. About 5060 BICs are expected to be functional by 1985, some of them covering interdisciplinary areas such as environmental studies, energy and science policy. The information system for Iron and Steel Technology being planned by the Hindustan Steel Ltd., and the Information System for the Electrical field to be organised by the Bharat Heavy Industries would be integrated into the national network. The BICs already established have taken up various projects to build up capacity for effective and efficient information service.

The INSDOC has compiled Regional Union Catalogues of Scientific Serials as also Catalogues of Scientific Serials of big libraries. Most of these are now in machine-readable form and can be manipulated for various outputs. It has also, in collaboration with the University Grants Commission (UGC), compiled and published a Directory of On-going research in the Universities in the country. A similar Directory has been prepared for the Laboratories of the Council of Scientific and Industrial Research (CSIR). These are being integrated and the data converted to machine-readable form.

Directory of Data Centres has been compiled jointly by the Documentation and Research Centre (DRTC) Bangalore and INSDOC, Delhi, as a project of the DST and converted into machine-readable form. Another Directory of Information Facilities available in Science and Technology Institutes in India has also been prepared by INSDOC. The different data bases would ultimately be rendered in machine-readable form for various referral and information services. INSDOC has also formulated standards in the field of documentation.

India is a vast agricultural country. It strives towards rapid economic development through industrialisation. A single national centre cannot cater to the needs of the entire area in dissemination of information. The States have therefore established their own networks and these are linked to the national units. For lack of time and space the infra-structures in the State of Tamilnadu alone will be discussed in this paper. The State of Tamilnadu is one of 24 states into which the country has been divided. It is situated in the South Eastern part of the Indian peninsula and has an area of 1,30,069 sq.kms. with a population of 4,11,99,168.

Technical education in Tamilnadu

There has been a spurt in the number of institutions of technical education in the past two decades as seen from the statistics given below

	1956		1974	
	Number	Annual Intake	Number	Annual Intake
Engineering Colleges	7	660	13	2040
Polytechnics	7	810	45	5600
Technical Schools	-	-	15	900
Financial Expenditure	1951 - 1956 = Rs. 80,000,00			
	1969 - 1974 = Rs. 447,000,00			

The State also has a Regional Engineering College at Tiruchirapalli and the Indian Institute of Technology, Madras, both established by the Central Ministry of Education for teaching of technical courses. Recently the State has established a Technological University besides the already existing three Universities for pure as well as applied sciences and one Agricultural University.

Industrialization

The Directorate of Industries and Commerce of the State is responsible for the planning and implementation of programmes for the promotion of Industries and Commerce in general and Small Scale Industries in particular. For effective implementation of these programmes the State has been divided into nine regions. Each district of the State has a District Industries Centre (DIC) whose personnel identify the industrial potential in the district and select suitable schemes, prepare project profiles, help in adapting appropriate technology, arrange financial assistance and extend marketing support to the entrepreneur. The DICs have personnel in each Taluk ie. smaller units into which the districts are divided for administrative convenience, who deal exclusively with development work. The DICs through their contact with the concerned governmental departments and other agencies co-ordinate their work.

Industrial Estates have been established in various parts of the State and this helps in the dispersal of industrial units and balanced industrial growth. There are at present about 46 such industrial estates and others are being developed, especially in backward areas. The Tamilnadu Industrial Development Corporation (TIDCO) has been set up to develop major and medium industries in the State. The major and medium industries in the private sector are helped by the State Industrial Development Corporation (SIPCOT). Besides the above, the Tamilnadu Industrial Investment Corporation (TIIC) and the Small Industries Development Corporation (SIDCO) cater to the needs of the industrialists.

It has been estimated that the State has 11.46% of the total small scale units in the country with a Gross Value of 12.36%. In 1971 the total number of small scale units was estimated as 18,440 and in 1978 as 21,273.

The Small Enterprises National Documentation Centre (SENDOC)

The SENDOC was established in 1971 at Hyderabad, by the Government of India to provide systematic information service to the small scale sector. It is a clearing house of information for both small industry entrepreneurs as well as to extension agents. It collects and organizes information on small industry development and has a Central Information File which will soon be computerized.

To cater to the information needs of this set-up the State has started Technical Information Sectional Libraries in different places:

- | | | | |
|-------------------|---------------------|-------------------|----------------|
| 1. Guindy, Madras | 2. Ambattur, Madras | 3. Katpadi | 4. Salem |
| 5. Coimbatore | 6. Madurai | 7. Tiruchirapalli | 8. Tirunelveli |

These collect relevant data on all aspects of various types of industries from Governmental and other agencies and disseminate the information.

To encourage big industrial units to establish their own Research and Development wings the Government of India has announced the incentive of tax exemption of about 4% of the total turn-over if utilized for R & D, Contributions to local/regional libraries also earn tax exemption.

The State plans an intensive non-formal, continuing education in 1979-80 with 3,600 adult education centres. The Southern Regional Patent Office has been established in Madras, Tamilnadu. This office, through its Central office would provide information on patent literature.

Public Library System

The State Public Library system plays an important part in adult education. As on March 1978 the Tamilnadu Public Library System had a network of 1,455 units in the State. According to the Delivery of Books Act of 1958, one copy of all publications in the country is to be deposited in the Regional Centre at the State Central Library at Madras. Besides this State Central Library and its branches, 38 other units established and maintained by other Agencies which are open to the public, are also receiving help from the State.

The Embassies of foreign countries such as the United Kingdom and USA have libraries attached to them. These have valuable collections in Science and Technology and are open to the public.

Discussion

A study of 58 University libraries in the USA reveals that the Library operating expenses double every seven years and this is true in other countries also.

As financial resources are always limited the developed countries have explored avenues for pooling them. The American Library Association (ALA), after a series of meetings in 1968 in various parts of the country, found that the barriers to resource sharing were mostly associated with people and not with technology. In the case of a developing country like India the barriers are not merely people but, in an equal measure, technology also. Quick means of communication like the Telex, duplicating machines, and processing equipment, are beyond the reach of most libraries.

It has been found from experience that libraries can cooperate in various aspects of their activities. But all libraries may not be able to interact in all the activities. Such total interlinking is also not necessary.

The types and needs of clientele served by each library/Agency differs. The first step in the planning of network should therefore be a survey of the clientele. In a developing country like India the important categories of the users of the information network can be identified as follows:

1. Rural Population in the villages which form the backbone of the country. The information needed is basic knowledge of agriculture, Appropriate Technology, Health Education, Family Planning and Adult Education.

The Public Library System with its numerous branches is best suited for this. It can, in cooperation with the Department of Public Health, serve the rural population.

2. Academic community of the State which needs the latest sophisticated information on innumerable subjects. The State has Universities with departments in various disciplines - pure and applied. Cooperative acquisition, cooperative cataloguing and even cooperative storage can be explored wherever possible. Building and maintaining of Regional Catalogues, providing SDI service are some of the many activities which, as cooperative efforts, yield maximum benefits with minimum expenditure.

3. Industrialists - This category of information seekers is steadily growing and can draw upon the resources of the Regional Centres of the Council for Scientific and Industrial Research (CSIR), the District Information Centres (DIC) the Technical Information Libraries in the different parts of the State, the Patent Offices, etc. and academic libraries.

The Indian Institute of Technology, Madras, developed in 1973, a new wing, the Industrial Consultancy Centre (ICC), to collaborate with the Industry and fulfil its need for information. With its well-qualified Faculty in different disciplines, its Laboratories with many sophisticated instruments, its third Generation computer which is now being utilised for Information Retrieval by the Regional Centre of the INSDOC, has the capacity to develop into a strong Regional Centre for the Southern Region and act as a clearing house for information in different disciplines.

National Grid

A central coordinating agency which will integrate the library services at various levels in the country as conceived by the NISSAT plan is laudable. This agency will strive at pooling of all resources, avoid duplication of stock and efforts and create means of distributing available information as widely as possible and with ease.

Even countries like Great Britain and the Federal Republic of Germany which are approximately equal in area to the State of Tamilnadu have felt the need for, and developed various cooperative schemes to pool their resources and minimize the expenditure. The organisation of a grid in a country as vast as India with sixteen states, some of them larger than the State of Tamilnadu, and with varied cultures and over fourteen official languages will indeed be a formidable task and would face organisational and financial constraints. Nevertheless a beginning has been made.

There is a dire need for creating the library habit which is declining these days among the younger generation. The Library must, therefore, project its image in as attractive a form as possible by holding 'Open Days', conducting Seminars, Lectures by the library staff and Faculty, and provide relevant bibliographic services to its users. The role of voluntary library associations such as the Madras Library Association (MALA) which was started in 1928, the Indian Library Association (ILA) and the Indian Association of Special Libraries and Information Centres (IASLIC) is very relevant for this purpose. Sufficient funds should be provided to these organisations to write articles on library use, hold exhibitions, conduct seminars pertaining to industry and initiate and support research into surveys connected with library use, improvement of library facilities and identification of problems connected with library services.

THE INTERNATIONAL TRANSLATIONS CENTRE:
AN EXAMPLE OF CO-OPERATION TO REMOVE BARRIERS TO COMMUNICATION

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The Language Barrier

I will not dwell on the importance of co-operation in general and between libraries in particular. With regard to the theme of this conference we are all convinced that co-operation is essential to contribute to the achievement of overcoming communication barriers. In the description of the theme and character of the conference it is stated that "IATUL has arranged meetings of librarians, organized excursions and made possible all kinds of seminars aimed at removing barriers to communication".

I should like to draw your attention to the aspect of removing a long existing and persistent barrier that hampers the dissemination of scientific and technical information: The language barrier.

Removing a barrier, in particular, is a matter of utmost exertion which one cannot possibly cope with on its own and thus co-operation is necessary. Joint efforts are likely to give results, the more so as this barrier, the language barrier, reaches beyond frontiers and it is needless to say, that international co-operation is a necessity. It is obvious that this does not facilitate the success of the undertaking.

In the description of the conference is also stated that "it would seem to us, that now the time is ripe to harvest what we have sown". Can we speak, when removing or breaking the language barrier, of a "harvest time". Has any success been scored so far?

Today I should like to give you a state of the art of what is going on in this field. The language barrier still exists and it seems that the impact of this barrier is increasing rather than decreasing, whereas the access to information sources is widening. With the aid of rapidly growing data bases more often the searcher comes across literature which is inaccessible due to the language. A point that needs to be emphasized is the fact that in some countries the knowledge of other languages is decreasing.

I should like to draw your attention to the unique co-operation within the International Translations Centre (formerly the European Translations Centre (until Oct.1977)).

The Centre, founded in 1961 under the auspices of the OECD, is the network of international co-operation of a number of outstanding libraries and information/documentation and translation centres. Participants in the network are organizations from Belgium, Denmark, France, Germany, Greece, the Netherlands, Norway, Spain, Sweden, Switzerland, Portugal and the United Kingdom. Co-operation is not limited to the participants in the International Translations Centre only. The Centre co-operates with a large number of translation centres, research institutes, and organizations active in the field of translations; for instance, with the NTC (National Translations Center) of the John Crerar Library in Chicago, NRC/CISTI (National Research Council of Canada, Canada Institute for Scientific and Technical Information), the All-Union Centre for translation of Scientific and Technical Literature and Documentation, Moscow.

In the Rules and Regulations of the International Translations Centre, the object has been formulated as "to encourage, improve and facilitate the use of literature published in less accessible languages and of interest to science and industry, and also to promote international co-operation in this field. For the purpose of this object the Centre shall:

1. maintain as complete as possible an index of translations of publications;
2. publish lists of information on translations or arrange for their publication;
3. facilitate access to translations;
4. co-operate with institutions engaged in similar activities, and serve as the main co-ordinating centre of an international network for improved utilization of translations;
5. study new methods of facilitating dissemination of translations".

I would like to underline co-operation and promotion of international co-operation in this field. This co-operation has yielded results.

The Centre contributed in the preparation of the International Standard ISO 2384-1977 - Documentation - Presentation of Translations. The Centre therefore has a category A liaison with ISO TC 46/SC 7 and a category B liaison with ISO TC 46/SC 6.

The Centre proposed to UNIBID (Unisist International Centre for Bibliographic Descriptions) an amendment to the UNISIST Reference Manual for Machine-Readable bibliographic descriptions concerning descriptions of translations. This amendment resulted in a draft extension for information relating to translations and will be presented at the meeting of the Advisory Committee of UNIBID in September 1979.

Concerning the object of the Centre to maintain as complete as possible an index of translations of publications in less accessible languages, the Centre has got a new impulse when it was decided that the Centre would jointly spot scientific and technical translations with the Directorate General for Scientific and Technical Information Management of the Commission of the European Communities, Luxembourg, and the Scientific and Technical Documentation Centre of the Centre National de la Recherche Scientifique (CNRS) in Paris.

As of January 1978, their former publications:

- World Index of Scientific Translations and List of Translations Notified to the International Translations Centre;
- Transatom Bulletin;
- Bulletin des Traductions

have merged into one common monthly publication entitled WORLD TRANSINDEX. At the moment negotiations are going on to bring the WORLD TRANSINDEX data base on-line.

Besides the co-operation of the Centre with the CNRS and the CEC, I like to mention the co-operation with the BLLD. A comprehensive bibliography on journals translated cover-to-cover, or selectively, together with journals which consist of translations selected from multiple sources was jointly published and appeared in December 1978. This publication is called JOURNALS IN TRANSLATION. A microfiche, or rather a COMfiche version of JOURNALS IN TRANSLATION is published by Instituto de Informacion y Documentacion en Ciencia y Tecnologia, ICYT, Madrid, the Spanish participant in the International Translations Centre network.

An extension of the services of the International Translations Centre to all "interwestern" translations in the field of science and technology is being considered. A proposal, prepared by the International Translations Centre is under discussion in the EEC's Committee for Information and Documentation on Science and Technology, CIDST Working Group Multilingual Aspects.

The Commission of the European Communities gives a high priority to co-operation in overcoming the language problem in its plan of Action for the improvement of the transfer of information between the European languages. Methods and tools to break the language barrier must be made available. The Commission of the European Communities undertook the implementation of an action plan covering the years 1977-1979. In this action plan attention will be paid to a.o.:

- Automatic- and semi automatic translation;
- terminology data banks;
- multilingual thesauri;
- encouragement of multilingualism.

For the planning and implementation of this work, the Commission set up the Committee of Experts for the Information Transfer between Community Languages (CETIL).

The International Translations Centre maintains narrow contacts with both CETIL and CIDST. Staff members of the International Translations Centre are on the Committees.

Co-operation on an international level largely contributes to the objects of the Centre.

The language barrier is still a real barrier in the flow of scientific knowledge. A barrier of which the impact will be more and more felt now that the means of communication are improving more and more and the establishing of contacts is becoming easier every day. Today we live in a time where it is possible to contact colleagues in other countries, in other parts of the world, within a few seconds. But to communicate with them, in a language we both understand, is not always possible. New data bases, springing up like mushrooms, refer to more and more literature in more and more languages. And when the document has reached the customer eventually it is not impossible that it is written in a language he cannot read.

International co-operation is the password to break barriers and in particular the language barrier.

Now it is time to harvest what we have sown. Perhaps at the moment the harvest seems to be small yet, but let co-operation be the means to have a large harvest soon.

DISCUSSION

Mr. C.G. Wood: Recalling that one of the first and major approaches to airing the difficulties of scientists was at The Royal Society Conference, in 1948, have you not felt discouraged about the slow progress in this field?

van Bergeijk: No, the consolidation of achievement in these later years has been real; a substantial part of the impetus has come from the need to tackle the European situation - which has been radically affected since the early days.

Dr. V. Jarc: Nearly all international commercial databases are English-based. What possibility do you see for translating these bases and making them more available to none-English speaking nations?

van Bergeijk: First, we are starting by translating the instruction manuals for the various systems. This has been stimulated by the development of EURONET.

Miss Furuzan-Olsen: We pay a great deal for subscriptions to translation journals. Is the provision of translation journals a possible function of your centre?

van Bergeijk: A translation made in a cover-to-cover centre translation journal is cheaper than a specific translation made for an individual.

Dr. Z. Kováts: I do not agree with that answer. The language barrier operates quite differently for a nation like Hungary, which contributes less than 1 % to the world's scientific literature. For us the translation of papers into English is little help.

Prof. A.J. Evans: Do you get involved in transliteration problems and, if so, what standards do you use?

van Bergeijk: We have been using British Standards but we are moving towards ISO in the hope that they will be attaining a series of standards acceptable to all.

Wood: It seems relevant to ask Mrs. Durairaj, who has told us about the sizeable number of interlending requests to West Germany, what the language barrier means to her.

Mrs. J. Durairaj: There are 14 different official languages and, unlike in Europe, which has the common Latin script, the scripts of these languages are different.

Dr. N. Fjällbrant: Could you give us some information, Mr Bergeijk, on the present development of international terminological data-banks?

van Bergeijk: There is, at present, a rapid increase in the production of terminological data-banks. A lot of work is going on at INFOTERM, Vienna.

COOPERATION OF HUNGARIAN TECHNOLOGICAL UNIVERSITY LIBRARIES ON
THE FIELD OF SCIENTIFIC INFORMATION SERVICES AND THE SPECIAL
FEATURES OF THE VESZPRÉM UNIVERSITY LIBRARY'S ACTIVITY

Dr. Z. Kováts

Director, Central Library of the Veszprém University
of Chemical Engineering, Veszprém, Hungary

In his discussion my Hungarian colleague, Mr. J. Zsidai dealt with the cooperation of libraries from a theoretical point of view. I want to add a few numerical data to this subject.

I registered the interaction of the Veszprém University Library and other special libraries, especially that of the TU Budapest and TU Miskolc. Besides the two TU libraries in Hungary we are in permanent contact with about one hundred special libraries, interested in our services: computerised SDI, interlibrary loan and reprography services, as well as our translation service.

The table below shows the figures relating to the main information services supplied to each other bilaterally.

Table: Interlibrary Loan and Reprography Services Supplied between the Veszprém University Library and the Other Two Hungarian Technological University Libraries

Veszprém supplied to	Budapest	Miskolc	Others	Altogether
originals	1	6	45	52
/in per cent/	1.9	11.6	86.6	100
reprographies	32	152	2558	2742
/in per cent/	1.17	5.54	93.29	100

Veszprém received from				
originals	16	5	521	542
/in per cent/	2.95	0.92	96.13	100
reprographies	426	51	2428	2905
/in per cent/	14.66	1.76	83.58	100

First of all it can be seen that neither the bibliographical services, nor the translations are mentioned. I must state that there is no need for co-operation in translation services. The TU Miskolc Library runs a translation office staffed with a qualified personnel similarly to that of the TU Veszprém Library. Both are able to fulfill not only the needs of their own universities, but the greatest part of their capacities, up to 90 % serves outdoor users in the region. The TU Budapest Library has no translation office of its own but has sufficient access to the various translatory services available in the capital.

Dealing with bibliographical services, I have to mention that automated, computerised SDI services are available only in Miskolc and Veszprém. The TU Budapest has a fairly broad profile, less defined than those of the other two, so establishing a similar SDI service would require much more efforts, then either at Miskolc or Veszprém.

The TU Veszprém and its library is engaged only in chemistry proper; not even in all aspects of it. Biochemistry, e.g. and related subdivisions are not cultivated. But no branch of chemistry can do without extensive use of its special literature, so the best conditions have been insured to establish a computerised SDI service. The service is running since 1971 on the basis of CACON tapes. The TU Veszprém itself uses 60 of the total 170 profiles, TU Budapest subscribes to 5 and Miskolc to 1 of them.

Shortly after Veszprém, the Library of the TU Miskolc organized the next computerised SDI service in Hungary based on METADEX tapes. Since metallurgical topics do not belong to the research and educational profile of the Veszprém University, we do not use the METADEX services.

Cooperation between the institutes mentioned is most intense in loan, and especially in reprography services. The table shows that lending of original documents is an information service of minor significance. This statement is especially valid for Veszprém. We are lending only books, but no original journals. Therefore, our reprography service produces relatively high figures with respect to our stock of only 20.000 bound volumes and somewhat less than 1.000 current primary journals.

Looking at the share in the information services of the Veszprém University Library of the TU Budapest and Miskolc it can be seen that Budapest has a very low share in both loans and reprographies. Taking into account that column "Others" covers 72 receiving libraries and 95 of those supplying services to Veszprém, it means that about 38 reprographies in average have been supplied to 72 of our outdoor clients in 1978. The share of Budapest in our services does not exceed the average, but the share of Miskolc is about 4 times the average in reprography and 8 times in loan services.

The other side of the cooperation looks as follows: we required and received from 95 libraires 542 original documents and 2.905 reprographies. This reduces in average to 5.7 originals and 30.6 reprographies in 1978. In this respect Miskolc is on average level and Budapest exceeds it 3 times in lending originals and 14 times in reprography services. I want note here that there are also IATUL member libraires from abroad in the "others" column. They provide a most valuable aid to us. We rely quite regularly on the services of Delft, Trondheim, Helsinki, Hannover, Laughborough, Dortmund, and so on. I would like to express here our grateful acknowledgement of their quick and reliable services.

Now what can be said about the special features of the information services of the Veszprém University Library? Unlike most public libraries in Hungary and the socialist countries, our library operates on an almost commercial basis. We bill our outdoor clients, and the returns cover not only the direct costs of the services, but also the taxes, and development funds. A fraction of this income is used to provide to premium to our librar-

ians, performing the tasks.

In my opinion the librarians have to be involved materially as well in the services. When bilateral cooperations are not in balance, more explicitly, when one library makes use of the services of another library and is not able to return them on a similar level, it should pay for the differences. Without due reimbursement no reliable service exists. - If a library, or individuals of its staff work better than others engaged in a similar job, everybody wants to make use of his/her services. So the cooperative librarian will work much more for the same wages than the lazy one, and the diligent gets punished instead of being honoured. Therefore a service is suggested in which the employee carrying out excellent work is honoured.

There is apparently a contradiction here. I want to say that the premium paid to the librarians, performing the outdoor services does not compensate their efforts. It is really only an acknowledgement of their cooperation and reliability. The premium in a year paid to most librarians in Veszprém amounts in average to one month's salary.

Other special features to be mentioned are as follows: we are oriented to information services: bibliography, reprography and lending, as well as translations but no documentation, no editorial and/or publishing activity, and so on. Despite the very simple construction of our organization we are able to fulfill the fundamental needs of our users within and without the University.

I am convinced that we as relative small special libraries - each concentrating on a well defined subject - are able to cover the scientific information needs of a small country, like Hungary only if we co-ordinate thoroughly our services and other activities.

DISCUSSION

Mr. C.G. Wood: I was interested to hear about the dispensation of personal rewards for extra work involved in the operation of a cooperative scheme.

Mr. P. Durey: This idea of personal reward may be an unfamiliar concept for British librarians who are employed on scales with regular annual increments but would not be unfamiliar to American librarians who are accustomed to receiving increases in salary as merit awards.

Dr. D. Shaw: Have you any comment to make on the approach of the CISTI to the provision of information services? I believe that the recently retired Director used to insist that services to other institutions were paid for on a commercial basis. Those which could not be sold were withdrawn.

Kováts: Yes, I approve of that approach. Furthermore, I think that all library and information services should be contracted out.

Mrs. M. Slajpah: It is recognized in Yugoslavia that the central university library has a duty to help the special libraries in their work. This activity is supported by a financial contribution from the user, who pays the difference between the funding from the research community of the Republic towards documentation development work, and the total cost.

CO-OPERATION IN THE PROVISION OF SERVICES
TO READERS IN CONURBATIONS

A. C. Bubb

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The development of higher educational institutions in Great Britain in recent years has slowed down. Financial restrictions have meant that new projects are few and that some which had been started have been terminated before they could be completed as originally intended. Furthermore student numbers are, it is predicted, likely to fall. We have reached what it is fashionable to call a period of consolidation and it is therefore not without interest to look at the library consequences of the growth of the last few years. This is of particular importance in large urban areas for there higher educational institutions frequently cluster with marked consequences for the library services they provide.

It could be argued that the main aim of co-operation between libraries should be to give greater satisfaction to readers. No doubt other aims could be advocated and one which appeals strongly to those concerned with the financing of libraries is the possible financial economies which may result. But many practising librarians would agree, if only in private, with the statement of one convinced advocate of co-operation in a conurbation that "co-operation has failed if it saves money."¹

Whatever the aims, however, it is clear that in many large urban areas in Great Britain there are a number of libraries concerned wholly or in part with services to higher education yet differing in age, adequacy, relations with their parent institutions and financial support. Co-operation of some sort between such libraries seems an obvious way forward.

The users of such libraries may owe their primary allegiance to one or more of the institutions providing them; they nevertheless tend to move between libraries as the need arises, and according to patterns often little known to librarians or academic staffs. Certain broad rules seem to apply to this ill-defined process and in general students at undergraduate level, expect provision to be made by their own parent institutions for their needs, although how often that happens in practice or whether such students use the provision made for them in the intended way is debatable. For the purposes of teaching, research and post-graduate study of various types, however, the libraries of one urban area, not far apart if one measures distance on a map with a ruler, may be seen by users as forming in some vague way a large collection of library material stored for a variety of little understood reasons at various points in the area. So as the number of institutions of higher education in Great Britain has grown and as groups of institutions, not always clearly distinguishable one from another in their aims, have appeared in large urban areas, attention has naturally turned to the possibility of co-operation. While the satisfaction of readers has figured largely in such thinking, particularly from the library side, the financial aspects mentioned above have undoubtedly encouraged such projects as that recently sponsored by the Committee of Vice-Chancellors and Principals. That body felt that two specimen groups of university libraries, which might in some way be expected to have co-operative arrangements,

should be examined. The reception given to the proposals may lead one to think that, while co-operation in a general sense is felt to be of benefit, the precise benefits to be expected from it are still uncertain and still less certain are the resources of the urban area from which such benefits might flow. To consider university libraries only is to ignore not merely non-university institutions of higher education but also major public libraries.

To take first the accumulation of library stock, it may seem at first glance that there would be considerable scope for co-operation in ensuring that material of importance was provided in the area and that unnecessary duplication was avoided. Yet a detailed study of library co-operation in Sheffield found that there was "a relatively low degree of overlap".² In the libraries of the University of London scattered over a considerable area, a similar conclusion was reached and it was stated that they "formed one of the largest library systems in the country. If overlap is low here, then what are the chances of high overlap within smaller library systems?"³ These conclusions if generally true seem to demonstrate that while there may be deficiencies in the area's stock the resources released by cutting out unnecessary duplication of acquisitions may well be small.

Supposing the stocks of the group of libraries to be reasonably good one may probably turn to the records kept of them and of how these records and other services can best be communicated to users. There always seems to be a belief that a union catalogue of the holdings of the libraries in a conurbation is of value in itself. If such a record is constructed, however, it can only serve a useful purpose locally if a local inter-lending system is based upon it, or if readers move from one library in the neighbourhood to another because of information contained in the catalogue. It may of course serve as a guide to book selection, but the evidence mentioned above seems to show that a union catalogue would not be of great assistance. There are of course many interesting developments in the field of co-operative cataloguing in Great Britain, in addition to the work of the British Library. It is noticeable, however, that even if as in Birmingham the plan originated to serve a group of like-minded libraries in a conurbation, it has grown to serve libraries scattered all over the country without distinction of type.

Perhaps more can be said for co-operative attempts to publicise existing services than for the construction of co-operative records. It is no doubt simple in theory to prepare a document setting out what a reader may expect from different libraries in a neighbourhood but it is difficult to bring it off successfully when different philosophies of librarianship, different financial capabilities and different capacities of staff are involved. What counts to the reader is how he finds and how readily he can gain access to what he needs in another library in the conurbation which he does not normally visit. This often seems to be less a question of publicity statements and more one of flexibility and diligence in looking after readers in general.

One may also look at the advantages to readers derived from co-operation in unifying and improving administrative procedures and fostering contacts between library staffs who might not otherwise consult together. It has been hoped by some advocates of local co-operation that from such links, and the use of co-ordinated stocks and co-operative catalogues other joint activities might arise with a process of continuous consultation between the libraries who direct all of the operations.

There are obvious difficulties in this. There are great differences between institutions and by extension between their libraries, even if they all nominally work in the field of higher education. In any case not all libraries

of interest to higher education are provided primarily for that purpose, notably the large urban public libraries. In Leeds some years ago, for example, it was found that almost all of the university students who did not use the university library went to the public library.⁴ Looking in fact at the variety of libraries found in almost any of the conurbations one may well be surprised at the degree of co-operation that exists, considering the very different financial backgrounds, the degrees of openness to the reader, and concepts of service. The conurbation of Greater Manchester, in which the University of Salford functions, has for example two universities, a polytechnic, a major public library and other smaller ones, and an assortment of other colleges of higher education. Much the same could be said, to take examples at random, of Birmingham Newcastle or Sheffield.

Even if one accepts that diversity of institutions and of libraries works against the theoretically desirable co-operation there are other factors of importance. For example, geography has an effect; not so much the distance on a map, but the distance between libraries by public transport or when taking account of the one-way streets and the availability (and cost) of car parking. Also important is the fact that neighbouring academic institutions may in some fields be in competition and that as far as co-operation between libraries implies rationalisation provision and the avoidance of overlaps (if in spite of the evidence such things exist to any serious extent) there are still great difficulties when parent institutions persist in unco-ordinated activities. Consideration of library co-operation in higher education without looking at the co-operation of parent institutions may not be a very fruitful line of investigation.

At a time when Great Britain has elected to power a government concerned to make economies in public spending the financial implications of co-operation are important. The view that libraries would be cheaper if they co-operated persists and urban areas of higher education are likely backgrounds to such a belief. Yet, as already mentioned, advocates of co-operation do not think it will reduce costs and from the United States it has been said that there is little evidence that co-operative efforts "have significantly improved services to clients and virtually none that they have reduced costs."⁵ An interesting product, however, is the improvement of readers' services in an individual library by, if one may so put it, the enhancement of its individuality, possibly by co-operation on a basis other than local. A case is the use in the library of the University of Salford of the services provided by the Birmingham Libraries Co-operative Mechanisation Project which started in a conurbation with a fairly typical group of two universities, a polytechnic and a large public library. The systems developed have found favour with libraries scattered over a wide area of Great Britain and have produced the result that in the Manchester area Manchester Polytechnic and the University of Salford are better able to discuss some common problems together than with other libraries in the area because each use the same system to improve readers' services and do not object to its centre lying a considerable distance away.

But surely the implication here is that anything done locally to improve resources or records may be on too small a scale to make much difference. As Mason has it "so we extend interaction of collections and services, so we exchange borrowing privileges: when it is all added up we have extended our potential only a fraction: I do not decry its effects and we would not give them up but we are building anthills when we need mountains".⁶ That was said some years ago and on United States problems. In a smaller country this may now look a little different.

Advocates of close co-operation between libraries serving higher education in conurbations may be at fault not only in supposing that important economies

can be made by the libraries without much change in the parent institutions, but also in ignoring the extent to which local resources are only part of the material available to local users. They may be aware of the British Library and its many services, but are perhaps less well informed on the growing number of co-operatives covering a region or possibly as in the case of the Birmingham scheme of even wider areas. The staple of much discussion of local co-operation, such as inter-library lending, the production of union lists and so on tends to lose its importance. I recall at least two union lists produced in my own conurbation which seemed mainly to be of interest to librarians and I do not think that they ever exercised much influence on the selection or retention of journals in the fields with which they dealt.

One may guess that the more information is used by libraries in the form of mechanised systems the less importance the possession of documents in a small geographical area will have. One may debate the desirability of this development, but now as we hover on the edge of the Teletext era we must consider that the book stock in the library down the road may be of somewhat less importance to us.

If of course the future lies with big systems there will be dangers of which many advocates of local and regional co-operation are well aware. The larger the organisation the less chance a user has of influencing it and the greater the possibility of a complex system of control with perhaps a built-in tendency to fossilization. Even in the small local schemes there is always a danger from committees which may see various ill-defined sorts of co-operation as absorbing tasks in themselves. But, as was said earlier in this paper satisfaction of readers is our business and we are judged by the services available in our libraries. This may make for willingness to change for "librarians who assign top priority to service will exhibit behavioral patterns which are considerably different from those who assign highest priority to the maintenance of internal procedures and records".⁷ This does not necessitate uniformity or the bringing of a group of libraries into one system.

Humble aims are likely to be useful and, let us admit it, quite sufficiently time consuming. Experience in the conurbation in which the University of Salford lies shows that to frame a statement for one institution on the availability of services in another can be quite a complex business. But working on this level and leaving aside the more grandiose schemes there is a real chance of improving things for the reader about whose movements between our libraries we often know so little. Schemes covering larger areas can relieve us of some of our troubles and new forms of information storage and transmission perhaps take care of others. Then we can hope to know, as one exponent of conurbation co-operation has put it, that "co-operation is a means of self-expression".¹

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DISCUSSION

Mr. C.G. Wood: I operate my library functions within a conurbation. As soon as, for example, our library instruction programmes direct our students to the facilities of the larger public libraries in the U.K., am I not already committed to cooperation? Moreover, as I cannot possibly be involved in the finances of the other institution, the limits of cooperation are proscribed - beyond remedy.

Bubb: I think we are moving rapidly towards a situation where the big public or other library institutions will become less receptive to sharing loads so that all too soon we may be faced with this additional break in cooperation.

Prof. A.J. Evans: The other area considered by the University Grants Committee was that of Leicester, Loughborough and Nottingham. We had a useful although abortive discussion in that we agreed that there was little scope for useful (i.e. economic) cooperation without the involvement of the academic side and they were not represented at the meeting although the point was made beforehand.

Mr. L. Gärdvall: Do you think cooperation would go better with direct funding from the government, instead of libraries receiving financial support from their universities?

Bubb: No. I do not think that the central bureaucracy could do the job of finding ways of cooperation. This requires good will and personal initiative.

Mr. S. Westberg: Experience in Sweden of the problems of academic libraries getting money which has been specially allocated by central authorities does not necessarily show that this would be better than being dependent on their respective universities.

Mrs. E. Törnudd: You painted a rather sinister picture of the attitudes of academics towards the provision of services to extramural clients. My impression from the Helsinki University of Technology is a "nobless oblige" attitude. Do you not also experience this?

Bubb: Yes, but individual interests come first. If a library renders good service to the university, it tends to concentrate on intramural users.

COOPERATION BETWEEN THE ESTABLISHMENTS
OF HIGHER EDUCATION IN LAUSANNE

T.J. TANZER

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Lausanne, Switzerland

My talk will deal with the possibilities of cooperation, the actual situation and the limits it imposes. We shall then examine possible developments and see how far that cooperation can be extended and where its limits lie. We will then see what possible benefits might accrue.

The study was undertaken under a mandate of a meeting of the governing bodies of both establishments, the rectorate of the university and the presidency of the Swiss Federal Institute of Technology of Lausanne.

To put you in the picture of the situation let me describe to you quickly first of all the activities of the two universities, both of which are in the throes of moving onto new adjacent campuses on the outskirts of town.

Lausanne University is a full university with faculties of humanities, social sciences, medicine, life sciences and exact sciences which has in addition a certain number of specialized schools notably pharmacology, criminology and comparative law.

The Federal Institute of Technology has 10 departments comprising civil engineering, surveying, mechanical engineering, electrical engineering, physics, chemistry, mathematics, materials science, architecture and micro-engineering. In addition it has attached a certain number of specialized chairs or institutes of which one can mention the chair of pedagogy and didactics and the center for plasma physics research. It has virtually no life sciences.

The university library is at the same time the cantonal library and as such is the sole copyright library in Switzerland, the canton of Vaud being the only Swiss canton to have a copyright law. It is only the university book collections that will move to the new campus, the cantonal collections staying in town, at the old site in a splendid old building. This building is the old university, which beautiful though it is, is totally unadapted to the role of a rapid circulation system and open stacks which is the lot of a modern university library. Its book stock is well over 1 million books, it has a staff of over 60 persons and its purchasing, cataloging and circulation are computerised by the now well known SIBIL system. Those of you who came to Lausanne for the 1976 IFLA meeting will have had a chance of seeing it. Its move to the new campus is planned for 1982 although the humanities library has already moved to the new site in 1977.

Our technical library is infinitely more modest, as what became the Swiss Federal Institute of Technology of Lausanne (Ecole polytechnique fédérale de Lausanne) was until 1969 known as the EPUL (Ecole polytechnique uni-

versitaire de Lausanne i.e. the Institute of Technology of Lausanne University). Our collections comprise a mere 250'000 books, we have a staff of just less than 20 and our systems are simply manual. Whereas the university has some 90'000 circulation transactions per year ours are of the order of 25'000 counting consultations, local loans and interlibrary lending.

Let us now look at the areas in which we can cooperate. From the librarians point of view obviously in :

- acquisitions
- cataloguing
- circulation

From the subject matter point of view there are some overlaps in physics, chemistry, mathematics, history of art and perhaps certain aspects of medicine. This is obvious in the first semesters of study which are in part undertaken together by the university and technology students; it is far less evident in the later semesters when the specialities diverge more strongly and it is virtually impossible at post graduate and PhD levels. The reason being that the university tends more towards the theoretical approach whereas the engineers tend more towards the applications. Taking the example of chemists: the university chemists tend to go towards organic chemistry whereas ours specialize in physical chemistry, chemical engineering and analytical chemistry. There is one common institute which deals with radiation and electron chemistry.

Before proceeding to examine the librarianship aspects of the cooperation let me say that there is a number of institute libraries at the Institute of Technology, which although we help to organize them from the point of view of cataloguing and indexing we have no say in their acquisitions or of disposal of the funds for book purchasing.

There is another point to mention, the principal inter-library loans partner for us at the Institute of Technology is our sister organisation The Swiss Federal Institute of Technology in Zurich or the ETHZ (Eidgenössische technische Hochschule Zürich) which is world renowned. Their collections comprise over 2 million books and nearly 20'000 periodicals and their role is to be the national technological library of Switzerland.

Notwithstanding all this we have examined with my colleague Mr. P. Gavin, the assistant director of the University Library, not where there were divergencies, but rather points of common interest from which cooperation could be started and later increased.

Let us now look at the current situation of acquisitions : there is no common ground and no cooperation in any shape or form at present. Except perhaps such costly books as Beilstein. It is also obvious that in specific disciplines eg. theology and mechanical engineering no common ground will ever exist. No Deus ex machina can intervene here.

For disciplines taught at both establishments eg. chemistry, physics and mathematics purchasing of the same copies at both places may be not only justifiable but necessary. The time spent examining each case may be costlier than the savings.

The main point of action then would seem to be periodicals. They are costly in that they represent an long term engagement in subscriptions, bookbinding costs and administrative handling. An essential prerequisite to this would be to establish a policy and be able to enforce this at the Institute of Technology obliging individual chairs not to take out their own subscriptions as it would be nonsense to economise between the University Library and our own yet admit multiple subscriptions within our own sphere. Our study has lead us to make some spotchecks, which however for the moment are inconclusive, a more detailed study being necessary.

What of the future? A systematic coordination is virtually impossible with the present system which would require the circulation of lists or regular meetings to be effective. No one can spare the time for this.

If however the two libraries shared a common automated system then a regular consultation to avoid a double subscription becomes a routine on-line check. In fact the University Library has already with the help of SIBIL achieved considerable savings by eliminating subscriptions common to the faculties of law, economics, geography, English and German. This is a direct result of a common catalog file on the computer for existing subscriptions, new orders are routinely checked. A prerequisite is of course that the peripheral libraries are incorporated in the automation system.

We now come to the question of circulation. Let me say that the rule my predecessor favoured was to not have inter-library loans within the town. Her contention was that a bus fare spent by the user was cheaper and quicker than the administrative expense and effort of sending the book across town. Today we must be service conscious and we do speak to our local partners who play the game very well with us.

Inter-library loans function well, not to say very well, in Switzerland. The king pins of the system in a union catalogue of books and a list of periodicals both of which are kept and maintained up to date by the Swiss National Library at Berne.

Both the University Library and the Library of the Institute of Technology participate in the Union catalogue and in the Inter-library lending. There is therefore no obstacle to cooperation now. And I may say that the system works. It works because the University library catalogue is on microfiche of which we have a copy (up-dated every six months) and our loans slips are marked with the University Library call number, which makes this all the easier. The same applies to our call for books from the ETH to whom about 85 % of our requests are addressed.

Should our purchasing however become shared then this traffic could increase substantially in the disciplines mentioned and a van shuttle service might be justified. However before envisaging such a step one technical requisite ought to be realized.

- a common automated catalogue which would allow the reader to :
 - find out in which library his book is sited and secondly
 - its availability status i.e. is it already on loan, at the book-binders etc.

In this way the user could be prevented from unnecessary trips, waiting or annoyance.

I would like to make a small digression now to a point of interest which has no direct bearing on the subject we are examining here : It is that the ETH, our main interlending partner also is automated and issues its catalog in the form of COM microfiche. The matter however does not stop there. As of the 17th May 1979 the ETH has made its lending file directly accessible to its users and we are currently ordering our books from there not by mail, but by terminal, which represents a considerable saving in time and effort for our staff.

I am mentioning this as a tribute to the pioneering work of my friend and colleague Dr. J.-P. Sydler whom you all know and who has done a great deal to modernise library administration in Switzerland and to whom I also owe a debt of gratitude in many other ways. I am taking the opportunity to thank him publicly in a forum that I consider particularly appropriate for such an occasion, to wit IATUL, since we are both technical librarians.

The digression closed let us return to our examination of the scene in Lausanne. To make this lending effective apart from the technical conditions a policy matter must also be settled and that is that all libraries concerned including the "peripheral" libraries must participate in this scheme. It goes without saying that small "peripheral" libraries cannot be forced to lend to just anyone, but their books must be in the common catalogue and they must agree at least to consultation of their collections on their premises. This condition is fulfilled to a very great extent at the Institute of Technology, but somewhat less at the University. If this condition is not fulfilled, then there is no longer reciprocity and the scheme cannot be implemented. This is liable to be the most difficult point on which to get agreement in view of the large number of varying partners that must be consulted and convinced.

We now come to the central point of the entire scheme which is the question of cataloguing.

In 1977 the Association of Swiss Librarians issued their Magnum Opus which is a treatise dealing with the way the ISBD is to be applied in Swiss Libraries. The University Library has been using ISBD since well before 1976, basing its application on provisional rules and bringing them up to date as new versions were issued. We changed over manually as of January 1978, and this I may say not without a good deal of problems in our small team. This step at each of the libraries means that the fundamental prerequisite of an identity of cataloguing rules is satisfied. If we have any doubtful cases we apply the University Library solution.

We are as yet not on the computer and current austerity measures may put this application some years away. The University Library has at present some 180'000 items catalogued by computer covering a whole or a part of their own collections, those of the Faculty of Letters, of the School of Business Administration and of the Faculty of Physics.

The idea of the University Library is to work towards a centralised machine configuration i.e. all the partners work on the same CPU (Central Processing Unit) while having various forms of terminals and peripherals on their own site accessible on/off-line. Such partners could be major peripheral libraries as well as the Library of Medicine which is a substantial unit of its own.

The heart of the scheme is the centralized union catalogue.

While such a scheme may be too cumbersome nation wide it has its advantages on a regional level :

- a single union catalogue puts a maximum of information within the users' reach, while
- requiring the administration of only a single computer center both from the point of view hardware and of software.

This means software improvements (or problems) have an immediate effect on all users, there is no superfluous information stored; only one file, albeit a big one, is consulted, and consulted exhaustively; and the potential pit-fall of gradual divergence of different systems is completely eliminated.

If we agree to this development and partake in this system a unified doctrine is assured in our region and re-development of yet another set of programs is obviated.

While agreeing with these principles we have not yet committed ourselves formally, but morally. We have however certain conditions to put to our, so to speak, Senior partners :

- 1) We want to be consulted over developments so as not to be surprised over costs and in order to be able to have our needs met.

The reason for this is that we have somewhat divergent views over hardware which we can discuss later.

- 2) We want to be kept aware of studies being undertaken for the purchase of hardware (scheduled for 1982) by the University Library for the same reasons.
- 3) Last but not least we want costs to be as low as possible compatible with high quality service.

The SIBIL is at present programmed in PL/1. This is an IBM language part of which is inherent in IBM hardware. The system is currently running in a time sharing mode on an IBM computer belonging to the cantonal authorities. The library share the computer with the cantonal accounts, to cantonal revenue authorities and several police files, the busiest of which is vehicle registration. Some of the files have higher and consequently conflicting priorities on the computer. Hence the desire of the library to have its own computer as of 1982 when waiting time is expected to become intolerable for on-line use.

Concerning the new hardware we are confronted with the following alternatives :

- 1) SIBIL is put onto a new IBM computer. Advantages: reloading onto a fully compatible if not identical hardware; no conversion problems. Simplest from the administrative point of view.

Disadvantages : The relatively higher costs of IBM hardware at present.

- 2) Transfer of SIBIL onto non-IBM yet completely compatible hardware. This solution still provides a certain amount of risk of the unexpected.
- 3) Transfer of SIBIL onto hardware other than IBM without considerations of compatibility. Problem : The reprogramming involved is difficult to estimate and even more difficult to weight its costs against possible savings.
- 4) The reprogramming of the entire system to suit very advantageous hardware offers that might arise.

It is as yet too early to choose any of the alternatives listed and only time will tell which solution will be adopted in view of the conditions prevailing at the time when the choice must be made.

To say how the Institute of Technology Library can be integrated into SIBIL is as yet uncertain. What is certain is that it must be done step by step. There is also no doubt that new books must be given priority. The question of how far we can rework our old catalog remains open.

Our biggest problem is without a doubt personnel. Consequently we are not certain how we should do our cataloguing in the future. The following courses are open to us for creating the input :

- a) with our own staff on our own equipment. To this end we must face the following costs :

- hardware : purchase or leasing
- maintenance
- personnel
- space

We would have to bear all these costs.

- b) Using the University Library as a full service bureau. We would then pay them per bibliographic unit of input.
- c) Our staff using a University Library machine on their premises. Method of changing not determined.
- d) Our staff sharing a suitable and compatible input machine with another user at the Institute of Technology.

Question as yet completely open.

As you can see we have looked at these possibilities from the qualitative point of view and we shall now have to quantify them. We are still a long way from being able to take firm decisions and the University is only one of the partners with whom we are discussing automation.

Before however drawing conclusions I would just like to mention a few improvements that we expect from SIBIL, which is a system that has not yet reached the apogee of its development.

The creators of SIBIL know that :

- there is a number of modules that must still be created.
- there are programs which are and will continue to be adjusted, corrected modified and improved.
- certain conceptual faults exist. They will be eliminated in due course.

New developments that are planned are :

- on-line updating of the order file.
- on-line correction of the catalogue
- cross-references of subject headings
- on-line access to subject headings (not UDC)
- automated ordering from closed stacks
- use of MARC tapes for cataloguing
- subject searching by Boolean logic
- use of on-line terminals by users
- control of current serials and periodicals
- etc., etc.

Now for the conclusion that may be drawn. It is not new to those who know the OCLC system. And we have proved it to ourselves all over again, to our entire satisfaction :

Really close library cooperation is facilitated and in fact only possible with the help of a good, sound and reliable computerised system.

The problems that remain are those of obtaining the necessary human and material resources. The benefits that accrue must be shown to be such that even in times of austerity the authorities cannot refuse to provide the necessary means otherwise all the foregoing plans will remain but pious hopes.

DISCUSSION

Mr. C.G. Wood: Did this set of cooperative proposals derive from voluntary agreement to proceed?

Tanzer: Informal talks had been held over a previous period. The matter came to a head with the formalized request for a report from the libraries concerned.

THE COMPILATION OF A PERSONAL DOCUMENTATION SYSTEM

R. Kriek

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At the Twente University of Technology, students are told as to how they can build up a simple documentation system for their own use. At the same time, they are given a guideline which they should follow in order to be able to do this. The starting principle is such, that somebody engaged in research should not have to spend too much time in building up such a system as well as the time involved in keeping it up to date. For that very reason, we have chosen a simple system using "key-words". The list of key-words, i.e. the collection of permitted terms, has to be arranged in such a way that it can be surveyed at a glance, that there are no "see-also references" and that the user can always make a quick choice from the key-words.

The list of terms is made in the form of a number of columns, each column representing a certain facet or viewpoint allowing the compiler of the documentation system both to index and retrieve the documents as it were in a multi-dimensional way.

Examples of such viewpoints, illustrating a documentation system in the field of physics, are as follows:

- theories
- physical phenomena
- mathematical techniques
- materials etc. etc.

When a document is to be assigned key-words, one should, as far as possible, choose one key-word from each column.

Every column consists of rather broad key-words; in addition a list also has to be made of narrower i.e. prohibited terms, and, which refer from these to the broader admitted terms of the list. It is self evident that the cross-reference list also contains references to prohibited synonyms which in turn, give the position of the permitted synonyms.

How can one compile a list of terms ?

Such a list of terms can be built up in the following manner:

1. Firstly, make a choice of your viewpoints.
2. Assign key-words to some one hundred documents, from any possible viewpoint; compile a "frequency list" of these key-words.
3. Place these key-words in the various columns making note of the frequency of occurrence.
4. Scrap all the key-words and synonyms which are too narrow in their meaning, but, take note of the frequency.

The key-words are uniterms. Combinations of two or more of these terms are only made during the process of searching; the "post co-ordinate index" system.

There are not very many different hierarchial levels contained in the list of terms; depending on the situation, dictated by the frequency a key-word is likely to be used, the key-word has two, three or four sub-levels.

Through the use of examples, it is made clear to the students that the use of too many hierarchial levels has, as a result, that one has to go through all of the key-words in the sub-levels when conducting a somewhat broader search. This can result in a rather complicated search, and, during such a search, the possibility arises that one may forget some of the relevant terms. In this case, the retrieval does not achieve the 100 % recall which, for a personal documentation system, has great drawbacks. A work list containing only a few hierarchial levels gives a higher percentage of retrieval, but, has as a disadvantage, that the precision level is lower. In the case of a personal documentation system this disadvantage is, in my opinion, not as great as the disadvantage of too low a level of recall.

Of course, the students are not only told how they should compile a list of terms. They are also told how to make a document description, what role the unique document record number plays in the system and equally what the function is of the file of document descriptions, assorted according to the document record number, how one can produce a list of authors and a list of subjects from the list of document descriptions, despite there only being one complete record available per document.

They are taught the "uniterm card system" and, for other types of manual documentation systems, their attention is drawn to the available literature.

Finally, the students attention is directed to some of the advantages to be gained by the automation of a personal documentation system, such as:

- the ease with which the computer can produce lists of authors, subjects, etc. to each other,
- the simple correction procedure, thanks to the possibility of mutating per field of a particular record,
- the possibility, by making use of the computer of making cross-sections of two or more sets of documents with different key-words ("post co-ordinate searching").

With this, I hope that you have been able to obtain an impression of the contents of a part of the course in the use of literature and the processing of that literature as given to the students of the Twente University of Technology.

TO COOPERATE OR NOT TO COOPERATE

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"to say we end
The heartache and the thousand natural shocks
That flesh is heir to, - 'tis a consummation
Devoutly to be wish'd."

Shakespeare

A paper written before a Conference, to be presented at the end of that Conference, is likely either to repeat points already and more tellingly made by earlier speakers or to make points already refuted quite devastatingly in previous papers. If this offering suffers the former fate, then perhaps it will serve as a summary of lessons to be learned: if the latter, it nevertheless unrepentantly still advocates caution. Marriage is still easier than divorce; a co-operative venture that has gone sour may be very difficult to unscramble. IATUL librarians are a very friendly, co-operative group of people: I hope none will have cause to reflect in years to come that they co-operated in haste, but repented at leisure.

That said, I would be very hesitant to present a paper on such a theme were it not that both the British Library as a whole and my sector of it, the Science Reference Library, have an unblemished and extensive record of successful cooperation with a wide range of other bodies. Nor, I think, have I personally ever failed to cooperate with my many colleagues on innumerable Boards, Councils, Committees, Working Parties etc.

So why should there be any doubts? Will not cooperation be a way of shielding us from the heartache and the thousand natural shocks that library management is heir to? If cooperation involves only a small group of people, who get on well together and who are not subject to receiving instructions from other authorities, working together for a relatively short period of time, there will be no insuperable problems. But how often is cooperation as simple as that? Can we, for example, guarantee our staffs will work together with the same enthusiasm that we do? Can we guarantee that one of us will not suffer a policy change or a sudden budget cut which will affect the scheme on which we cooperate? Can we guarantee that enthusiasm for cooperation will last among everyone in a venture, especially a long term one, or survive a change of chief librarian?

* The views expressed in this paper are the author's own and are not necessarily those of the British Library.

Professor von Gils¹ has indicated that conceptually, cooperative action is a hazardous undertaking. Nevertheless, we have heard during this conference of examples of successful cooperation. We will have examined why they succeeded and each of us, no doubt, assessed the likelihood that the same combination of circumstances applies in our own cases. For cooperation is, as Maurice Line² pointed out, not a universal panacea for solving problems, not even for problems which lie beyond the scope of one's immediate resources. It has to be evaluated against the merits of doing the whole task in-house (even if this means battling for additional resources), or using an agent, or contracting out the work, or buying-in a package (as distinct from a cooperative development project) or even the benefits and drawbacks weighed against the consequences, if any, of doing nothing.

Before undertaking any cooperative project we would all automatically ask ourselves what will be the consequences of the venture if it succeeds and if it fails. But many, I suspect, may be satisfied with answers which reflect the immediate and local outcome. In many cases, for example when undertaking cooperative research, no more than this is necessary but, if one is cooperating on some activity fundamental to the operation of the library or which will be affected in years to come by changes in the general library, information and publishing environment, then a longer term view is necessary. Cooperative ventures on document supply and document copying, for example, have to be seen against a background of national aspirations on the one hand and international copyright questions on the other.

Indeed, it is perhaps appropriate to remind ourselves once again that cooperation can be undertaken in two very different ways in each of which the criteria for success are very different. This paper is primarily concerned with the criteria for cooperation in the undertaking of practical library tasks, acquisition, cataloguing, research, enquiry work and so on. There is the other type of cooperation, that on decision taking, where success is measured largely by whether those involved can work together and whose objectives are very largely to enable cooperation on pragmatic projects to occur. I shall refer to examples of this latter type, eg the creation of common standards of the UNISIST programme, but these are not my main concern today.

In a recent³ paper "International cooperation in information transfer", Wysocki says, "International programmes clearly demonstrated that the main control of the literature is now in the hands of governments" and later that, "Government policies.... will determine the pattern for international cooperation for years ahead". Reading this it indeed seemed to me that before entering willingly into cooperative activities, librarians should try to see what lay ahead and to judge what the long term consequences, if any, would be. I do not think that many librarians would be likely to wish to tread a path of cooperation that led to governmental control of the literature or to acquiesce without qualms in cooperation determined by governmental policy, especially with 1984 not far away!

Of course, Government involvement, in some instances, is both inevitable and desirable. After all, the funds for most (but not all) university libraries are supplied by Government and Government funds the national library and information resources which, despite the bias you will expect me to have, I can genuinely say in the case of the UK are provided for the benefit of scholars and of organisations in the country as a whole, including, therefore, the universities. There is scope, I believe for even more cooperative activity than exists at present between the various libraries in the country and the national library and also between the library systems of different countries but there is a limit somewhere. Imagine the extreme situation of a single, central, computer stored catalogue for all the libraries of the world -

what a marvellous opportunity there would be for effectively censoring "undesirable" publications by simply deleting them from the record. Fortunately, there is now no risk of this happening (the inexpensive nature of mini and micro computers has ensured that much) but at one time it seemed we were heading that way and surely we should always be watchful lest our well meaning actions create an undesirable degree of risk of extensive power being concentrated in the hands of a very few people.

Perhaps there are three broad considerations which should be used when deciding on cooperation as a means of achieving an objective. The first is this question of what will be the consequences of cooperating or, for that matter, of deciding not to cooperate. I have already posed two questions: Can you really guarantee to fulfil your part of the commitment for the whole duration of the project? Can you rely on your partners to do similarly? I should have added a third: Does it matter if one of you fails to meet your commitment? In some instances, it will not. The longer term the project, the less likely that the first two can confidently be answered in the affirmative and the more important it becomes that the third is answered, no! Certain fail safe measures may need to be incorporated.

Still continuing the question of consequences, there are many others that could arise ranging at one extreme from conflicts of national interest via staffing troubles to, at the other extreme, the making, or breaking, of a friendship between two chief librarians.

The second set of considerations is the circumstances which give rise to the desire to cooperate. Is it a genuine belief that cooperation will give rise to an improved service, as one sees in the regional cooperative schemes in the UK such as LADSIRLAC, WESLINK etc, or does it arise from economic necessity (we can't afford our own computerised system) or, and this I suggest verging on a non-reason, is it because one's political masters want a cooperative solution? This last is certainly not impossible, it can and has sometimes worked, but a series of special factors have to be assured if cooperation for political reasons is to be successful. History is the study of broken treaties. Nevertheless, in our own field, if SDIM should be a warning to us all, SCANNET and, hopefully still, EURONET can stand as examples of what is possible through cooperation.

The third broad consideration is what are the relationships between the various organisations wishing to cooperate. Have they some sort of unity either of purpose or location? Unless the organisations are natural partners - and what would be a better way of satisfying this criterion than all the partners being members of IATUL, the members of which have a common purpose - cooperation is bound to suffer from differences of objective and even from difficulties in understanding each other's point of view.

I am sure that before any cooperative venture is embarked upon, a balance sheet should be drawn up of factors under each of these considerations and unless or until, in each of these considerations, the balance lies substantially in favour of success being probable, the venture should not be started.

Let us now look at things from different viewpoints. Four sub-headings might be useful:

- strategic aspects
- methodologies for cooperation
- organisational problems
- human factors

Strategic Aspects

I will not repeat those strategic aspects that I have already mentioned, but merely reiterate that even short term cooperation can have long term effects, particularly on the relationships between the cooperating bodies, beneficial if all goes well, disastrous if otherwise. An important point is that cooperating with another organisation inevitably affects one's future strategy for gaining resources, especially new resources, for pursuing the library's proper objectives. It is not just that resources for the cooperative venture must be assured, perhaps in lean times at the expense of other activities, it is also that, once a successful cooperative venture, which saved money, say, has occurred, one is likely to be pressed to do the same sort of thing for other activities.

Whether this is a good thing or not depends on many factors but in the end a library must be able to serve its own clients properly and not be merely a node in an impersonal network, and it must be able to respond and adapt as the needs of its clients change. Some forms of cooperative activity are wholly beneficial to these objectives, others may be less so.

Having concentrated on some of the dangers lurking in cooperation, let me for a moment dwell on that strategic sector in which cooperation is an essential and entirely beneficial feature, even if often difficult to achieve. It is that of establishing the conditions necessary before cooperation on practical library matters can occur. This is sometimes called establishing a framework for cooperation, sometimes creating an infrastructure. One of the most important aspects is the setting of standards appropriate for the operations on which one may wish to cooperate. Cataloguing standards, alphabetical rules, numbers of frames per microfiche, and so on. WIPO/ICIREPAT has had its greatest success in achieving standards for various aspects of patent documentation which have been beneficial to patent offices and to library and information services alike: yet the attempts to create mechanised data-bases by inter-office cooperation appear to have failed. The European Commission may have been less than successful in getting all memberstates to set up cooperatively the SDIM data-base, but they have been very successful in getting agreement on the X25 and X75 protocols for links to and between networks.

International programmes which require cooperation for their fulfilment but do not impose it, universal bibliographic control (UBC) and the universal availability of publications (UAP) for example, also set a very helpful framework within which cooperative ventures between a small number of participants can take place. Cooperation to set standards, to raise standards and to help ensure that local authorities accept that certain standards of service or provision are needed should certainly be encouraged.

Methodology of cooperation

Once the decision has been taken that cooperation is the correct path to tread on a particular project, there appears to be a choice of three ways of proceeding:-

- working together as one unit
- sharing the work on some basis between partners
- creating a unit to carry out the cooperative enterprise

Perhaps there are others but all those which occur to me seem to be variants on one of these three. Indeed, when one is, as we are, considering cooperation between widely separated and organisationally distinct entities such as technological university libraries, the first may not be a feasible method, unless one counts such activities as referral networks as belonging to this category.

The second is the most common way of working and is prone to most of the problems, particularly that of one partner not pulling his weight. If one of the aims of cooperating is to help a member partner or is deliberately planned as a means of helping one another through crisis situations, the solution is built in. If, however, the scheme does require each and every partner to contribute his share and failure by one can jeopardise the scheme, ways of minimising the risk should be examined.

One way is that of using a system of payments and credits. Every time a partner draws on the system he makes a payment; every time he contributes to the system he is paid. This would usually in practice involve a system of credits but if it is to be effective, there needs to be an occasional session of summing the pluses and minuses and making balancing payments. There are considerable merits in keeping cooperation on a commercial footing and it will certainly influence the approach to working of the partners. This system of working together is quite well known, particularly in computerised cataloguing and indexing operations, but perhaps merits consideration for wider use.

The third of the three types of cooperative mechanism gives scope for covering against the failure of one partner to pull his weight. If a separate enterprise is set up to undertake the operation, each partner having a share in the funding and in direction (but not in the management), it can acquire both an identity and viability of its own and, even if one of the original partners should withdraw, may be able to continue operating without undue disturbance. Unfortunately, there may be difficulties in the way of achieving a solution of this type if the cooperating organisations have different sources of funds and there are restrictions on pooling funds with those from other bodies. This can so easily arise within one country and may be even more of a problem if the planned cooperation involves partners from several countries. However, that it is feasible to have a cooperative partnership between very different types of organisation is illustrated by the creation in the UK of INFOLINE, the partners in which are two learned societies, one government department, the national library and one commercial company.

In effect, SWALCAP, a circulation control and catalogue system is a cooperative effort of this type. It was jointly set up by three UK Universities with its own management team. Operations such as OCLC and the British Library's BLAISE are not really cooperative schemes because they are managed by one only of the participating bodies but are more akin to agency services which one can buy in or not as one wishes just as one can use an agent for book acquisitions or buy direct, though it must be added that BLAISE is cooperating with the other cooperative cataloguing schemes.

Organisational problems

Inevitably, cooperating on any activity means sacrificing a measure of one's own freedom of action. Short term this is likely to matter little but in the long term serious problems can arise. The sort of problems I have in mind can readily be appreciated if the possible effect of changes in computer technology is considered.

When the only computers with the necessary capacity for library work were large, expensive machines, either libraries had to share one between them or "buy in" services from a bureau - often the central university computer. Under these conditions either there was a considerable hiatus when the computer reached the end of its life and had to be changed or there was a great reluctance to change to a different machine, even when the old one was obsolescent, because all the partners had to adjust to the new one and just one laggard partner could delay everything. Although programming costs are still very high, the new generations of mini and micro computers make it feasible for libraries once again to become self-sufficient and cooperation can take

the form of sharing the load of, say, writing catalogue entries. If cooperation is directed primarily to common standards, so that sharing the results of one's efforts is possible then the result is largely beneficial. One does need, however, to ensure as far as is possible that the terms of a cooperative venture do not bind one to using only the large computer and do not prevent use of new technology as it arrives.

The Commission's achievement of a common protocol (technical specification X25) for linking countries and computers to EURONET and another for interlinking networks (X75) has been a major achievement. There is some loss of freedom of choice of equipment but hopefully this is an acceptable penalty to pay for a considerable benefit.

Libraries of universities, whether technological or not, of course are funded from official sources and there is always a strong temptation on those who grant the funds to state in detail how they shall be used. In the UK, mechanisms exist to prevent too close involvement by government or civil servants in the running of the university libraries, though they must conform to broad policy directives on major matters, for example, where new buildings are concerned. Broadly, however, the librarian is able to operate under the principles of accountable management and, given that he must satisfy the needs of his clientele, may choose within the constraints of his budget how he goes about achieving it. But if any of his basic library operations depend on co-operation with another organisation, one of his options for choice is closed to him.

Dr. Zsidai, in his paper⁵ earlier, drew attention to one organisational obstacle to cooperation. He found, you will remember, that though he as librarian wished to cooperate with other libraries, the local university authorities were not always as keen as he was. Those planning to cooperate with another library will, no doubt, want to be assured that the libraries with whom they will be working have the full support of their organisations and may even want this signified in some formal way if there are any doubts.

Human Factors

In considering cooperation, one is considering the very fundamentals of human behaviour. On the one hand, most human beings are gregarious, many are generous to one another, many of our greatest achievements are due to people working as a team (eg climbing Everest or building cathedrals). On the other hand, human beings are individuals, each with his own idiosyncracies, likes and dislikes which - a factor all too often overlooked in social studies - change with time. The lessons of history must be learnt. History is littered with alliances which did not work at all (usually because one partner could not or would not meet his obligations), or which worked only while there was an immediate objective (a tyrant to be toppled, an aggressive country to be contained) and which fell apart afterwards. Only in a few cases have alliances lasted and are there any which have outlived strife against a common threat into an era where competition between the partners can ensue.

One of our eminent playwrights once said, "Progress depends on the unreasonable man". This is not a universal truth, it is only something said by a playwright, but it does neatly express the fact that in some cases, progress has depended on an individual having the courage to disagree with accepted practice and to be so convinced that he is right that he sticks to his point and eventually proves it. Such people are likely to be very difficult to co-operate with during their creative phase, though once they have proved their point they may then accept cooperation from others, perhaps on their terms.

Dr Urquhart and the NLLST is a case in point. Before he came on the UK scene, cooperative inter-lending schemes and laboriously compiled union lists were

the norm. Why these were being unsuccessful was that librarians cooperated together so wholeheartedly that somehow they managed to keep a most cumbersome edifice in place without realising that its increasing unwieldiness and failure rate was due to the success with which they cooperated. Far too much literature was involved; far too many libraries were cooperating.

If you look at the UK scene, you will not find that union lists and inter-lending between individual libraries have ceased. Far from it. You will find that such activities flourish but that thanks to the lessons Dr Urquhart taught us, these are kept within a scale on which success is possible. So, perhaps, one lesson is that librarians should be very chary of joining a large scale cooperative scheme or, to put it another way, they should be prepared to cooperate on any major activity only with librarians they know.

Does this perhaps lead to a factor which has to be carefully evaluated before embarking upon a long term cooperative project. Librarians change jobs, some retire, some even die. Will a project survive a change of personnel? Is its success or failure likely to be due very largely to the continued enthusiasm of its originators or will the project develop its own momentum and become independent of them?

Secondly, two or three IATUL librarians can willingly agree to cooperate but can each one convince his staff sufficiently to get the necessary degree of enthusiasm? Has not each of us known in our time a pet project stymied because our staff did not share our enthusiasm? Perhaps the successful projects will be those where the idea of cooperating came from the staff who succeeded in convincing the librarian of the benefits.

Finally, we should not overlook the possibility that even the friendliest librarian may have certain personal ambitions and that these, even if they do not conflict, may shape the course a project takes. A tiger can be very difficult to ride.

Conclusion

Successful cooperation which enhances the library's service to its users is a very satisfying undertaking. But it has to be borne in mind that cooperation poses major problems when the management of the project is concerned, not least because, as the very term cooperation implies, there is no overall management control. Nor have the librarians in all cases the necessary level of authority in their own organisation to shield effectively the project from adverse policy decisions. For many types of cooperative venture such matters impose no insuperable constraints but even in these cases each participating librarian should draw up a balance sheet of pro's and con's and should dispassionately satisfy himself that the balance clearly favours a beneficial outcome before embarking. I wonder, if such does not already exist, if there could usefully be compiled a Guideline for those considering cooperative projects, whether as a separate publication or as at least a chapter in Professor Atherton's excellent UNESCO handbook⁶ for those planning a library and information services.

I started with a well-known quotation of our aspirations. Perhaps, even if to my discomfiture, I should end with another quotation from the same source which expresses more effectively than I that too much careful weighing of all the factors may be the death of progress:

"And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought;
And enterprises of great pith and moment,
With this regard, their currents turn away,
And lose the name of action".

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ABSTRACTS
OF
THE PAPERS AND COMMUNICATIONS

IS COOPERATION A GOOD THING?

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Abstract

Instead of assuming that cooperation is desirable and then considering how to cooperate, librarians should analyse their aims and functions and consider how cooperative approaches compare for cost-effectiveness with 'going it alone' and dependence on a central service.

The acquisition function of libraries must be largely fulfilled by local provision. This must be supported from other sources, but cooperative acquisition schemes are expensive to administer and less effective than central provision or state-funded concentration of resources on a few libraries.

It has yet to be proved that cataloguing and classification in most libraries need be detailed, or that libraries cannot provide their own simple records more cheaply than they can obtain complex ones from elsewhere. If they do need to use external records, most of these will be generated by a national centre and obtained through a centre which may be cooperatively managed or commercial.

Availability to local users could be improved if libraries opened their doors wider to non-members. For interlibrary lending and photocopying, central collections, limited perhaps to core collections of journals, have distinct advantages over cooperative systems based on union catalogues, which are better used to provide a supporting system involving as few libraries as possible. Local cooperative systems can provide 24-hour access to a limited range of urgently needed material, but in most countries regional systems have little or no advantages. On-line access to holdings may however change the situation somewhat.

For book storage, regional solutions are inferior to local stores, which may be shared with other local libraries, and to national repositories linked to national interlending systems.

The automation of 'housekeeping' operations can benefit from the joint use of systems, whether already in use elsewhere, designed commercially, or developed cooperatively.

The psychological urge to cooperate is strong, but cooperation is not a panacea for the ills of libraries, and other solutions need to be identified and examined.

THE ORGANISATION OF CO-OPERATION

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Abstract

The organisation of co-operation

The paper deals with the following questions:

1. Why is interorganizational coordination a problem?
2. What is meant by "interorganizational coordination"?
What is its relationship to competition, collusion and coercion?
3. What are the potential barriers to interorganizational coordination?

To deal with these factors we will have to look first at the basic action orientations of individual organizations like fulfilment of programme requirements, the maintenance of a clear domain of high social importance, the maintenance of orderly, reliable patterns of resource flow and the commitment to a technological-ideological paradigm.

Secondly we have to deal with questions of compatibility between organizations. What is the amount of domain consensus, what the felt need for coordination, how do organizations evaluate each other, what strategies do organizations develop to impede or facilitate coordination.

4. What are arguments for tight coupling between organizations and what are arguments for loose coupling?
5. How can we design in networks which can deal effectively with problems of effective interorganizational coordination.

Three models will be discussed:

- a. the expert model
- b. the organizational development model and
- c. the action model

Summary

COOPERATION IN LIBRARY AND INFORMATION SERVICE - THE ROLE OF INTERGOVERNMENTAL ORGANISATIONS

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Numerous intergovernmental organisations (IGO) sponsor programs in the library and information field. These programs proliferate to the extent that there is a danger of duplication of efforts. Especially in small countries participation has to be limited to programs of highest priority, because a limited number of senior specialists cannot take the responsibility for countless projects.

The IGO programs in library and information service are reviewed briefly with special reference to those of interest to technological university libraries. The following organisations are mentioned:

1. The United Nations Family
 - 1.1 UNESCO, UN Educational, Scientific, and Cultural Organisation
 - 1.2 ECE, UN Economic Commission for Europe
 - 1.3 UNIDO, UN Industrial Development Organisation
 - 1.4 ECOSOC, UN Economic and Social Council
 - UNCTAD, UN Conference on Trade and Development
 - 1.5 IAEA, International Atomic Energy Agency of the UN
 - 1.6 FAO, Food and Agriculture Organisation of the UN
 - 1.7 ILO, UN International Labour Organisation
 - 1.8 UNEP, UN Environment Programme
2. Other intergovernmental organisations
 - 2.1 OECD, Organisation for Economic Cooperation and Development
 - 2.2 EC, European Community
 - 2.3 ICSTI, International Centre for Scientific and Technical Information of the CMEA member countries
 - 2.4 Council of Europe
 - 2.5 ESA, European Space Agency
3. Scandinavian intergovernmental organisations
 - 3.1 NORDINFO, Nordic Council for Scientific Information and Research Libraries
4. Bilateral intergovernmental cooperation

The paper, in conclusion, underlines the very important role IGO's have played in fostering international cooperation and expresses the view, that non-governmental organisations are needed to supplement the work of IGO's to ensure 1) adequate feedback from the field, 2) active participation in programmes, and 3) new ideas.

In the opinion of the author IGO's should continue to delegate projects to be carried out by the non-governmental organisations and they should increase the annual grants made to them.

COOPERATIVE COLLECTION DEVELOPMENT

James E. Skipper

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Abstract

Arguments supporting library cooperation are compelling in their logic and economic implications, yet a review of the history of cooperative efforts suggests the existence of strong opposing forces which, in many instances, have frustrated planning and implementation.

Successful programmes for the cooperative development of library collections must be related to ancillary efforts to improve access to materials and to afford better bibliographic control.

DOBIS AT THE BIBLIOCENTRE

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Abstract

The growth of the bibliocentre is traced from its origin in 1966 through to the selection, installation of the real time on-line DOBIS system, supported by internally designed and written programmes to load an existing database and produce output products. The methodology adopted for converting the database of approximately 400,000 records into a DOBIS format is described.

The role of DOBIS in achieving a high degree of efficiency to the workflow of the bibliocentre is examined in detail. The benefits, both to the network of users and the bibliocentre operation, resulting from DOBIS operating in-house, are highlighted. The versatility of DOBIS is demonstrated in a description of a unique application outside the scope of a library environment.

Future plans to utilize DOBIS LIBIS as a fully integrated library system, including order and acquisition, circulation control and catalogue output in micrographics are also outlined.

NEW ASPECTS AND TRENDS IN INTERLENDING IN THE FEDERAL
REPUBLIC OF GERMANY

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Abstract

The situation in West Germany is described. More than 500 libraries have been accepted as interlending libraries. A change in the use of interlibrary lending is noted. The differences between librarians and end users in interest in and attitudes to interlending is described. The main part of the paper deals with existing Union Catalogues, Indexes, both central, regional and local; databanks and what is being done in the field of data processing for interlibrary loans, as well as German participation in international networks. The Sondersammelgebiet Programm SSG (German Subject Specialized Libraries) are treated, as these play an important part in both regional and national interlibrary lending in their respective subjects. Mention is made of the legal deposit in the German libraries of German printed matter. The paper concludes with the observation that librarians have demanded a simplification of the system. A draft of new rules will introduce modifications in the existing system. Comparison is made with the BLLD model and it is noted that the German system is "slower and more ponderous". However, a central lending institution for West Germany - like that in the U.K. - is not to be expected. Instead - it is stressed - intensive and efficient use must be made of already existing resources within West Germany.

THE SWEDISH LIBRIS SYSTEM

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Abstract

The ADP-system LIBRIS-II is described with emphasis on its network structure. The connection of 10 libraries within the organization under the National Swedish Board of Universities and Colleges (UHÄ) and four other libraries is outlined. The coverage of acquired literature in the connected libraries is discussed, as well as the extension of the coverage which is achieved by a decentralized reporting of accessions in a large number of other Swedish research and special libraries to the Royal Library which submits centralized input to the system. Three possible models are presented how to offer access for searches to LIBRIS outside the family of LIBRIS-libraries through 1) the existing programmable terminals, 2) dial-up ports in the front-end computer, 3) packet-switching networks such as SCANNET.

Figures on data traffic in the network as well as error statistics are given, and possible conclusions are drawn. Variations in how the central processing unit is affected by LIBRIS usage are illustrated and analyzed. Response time and factors influencing on the response time are discussed. Facilities to indicate the system status at the terminals are described. The possibility to diminish (minimize) effects of system breakdown by indicating when the system is open again is emphasized. The expansion and the change-over to another computer and the problems involved in this work is also discussed.

THE PICA CATALOGUE SYSTEM

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Abstract

This paper describes the development and operation of the PICA cataloguing system. The objectives for the PICA project are given. The computer system is described together with the present on-line and off-line functions. Future planned functions of the PICA system are outlined: On-line thesaurus facilities, interlibrary lending facilities, statistics, interfacing with local library systems, acquisition administration, extended searching facilities. The suggestion is made that a standard local library system, which can be interfaced with the central PICA catalogue system, will be developed.

COOPERATION IN LIBRARY USER EDUCATION

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Abstract

The aim of this paper is to examine which areas of user education are particularly suitable for interlibrary cooperation. Goals and objectives for user education are described. Examples of cooperative projects are given: the SCONUL project, the travelling workshop experiment, and multimedia programmes for on-line information retrieval. Clearing houses for information on library user education projects are then surveyed. Finally, possible areas for future cooperative projects are discussed.

TEACHING LIBRARY CO-OPERATION TO LIBRARY STUDENTS

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Abstract

This paper discusses the need for cooperation between libraries, and the forms this may take with examples of both formal and informal cooperation. The author concludes that the profession of library and information science is in a state of change and that the library schools must try to train librarians for the future situation. With regard to library cooperation, any library school will have problems in teaching and motivating students for something that does not seem to exist in the real world of libraries. When it comes to promoting library cooperation, through education, there are problems on both the cognitive as well as the emotional level. It is important that cooperation between libraries is developed. This has implications for library education. The author concludes that the teaching of library cooperation to library students should be a shared responsibility between the profession and educational institutions.

COOPERATION AS A SOLUTION TO THE PROBLEMS OF EUROPEAN COMMUNITY DOCUMENTATION

Mike Hopkins

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Abstract

- brief introduction to the European Documentation Centre (EDC) system established in member countries of the European Communities and elsewhere
- problems concerning the administration of such EDCs in the United Kingdom
- problems concerning the bibliographical characteristics of European Community documentation and its exploitation
- local cooperative efforts in the United Kingdom - regional groups
 - newsletter
 - guides
- national cooperative efforts in the United Kingdom - professional courses
 - commission activities
 - library association
 - working party

Abstract of paper entitled
COOPERATION AMONGST THE SCIENCE LIBRARIES AT OXFORD UNIVERSITY

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In a historical introduction which traces the development of the Radcliffe Library alongside the Bodleian Library at Oxford it is shown how it took nearly two hundred years to establish a role for the Radcliffe as a science library. During this period, some of the science departments in the University of Oxford set up specialist libraries and from these beginnings has grown a very strong body of science departmental libraries. In spite of the richness and breadth of the literature collection in the University library nearly half of the scientific library resources in the University are devoted to supporting the departmental libraries. While some of these may, because of their unique holdings, be looked upon as specialist extensions of the main library, the majority of holdings duplicate the central collection. In order to ensure maximum inter-library cooperation, and in the hope that unnecessary duplication of stock and other library resources may be eliminated or avoided, a Science Libraries Advisory and Co-ordinating Committee (S.L.A.C.C.) has recently been established.

One important device to ensure the maximum benefit from the large collection of scientific serial publications (which includes all British publications deposited under the Copyright Acts) is the maintenance of a union catalogue which includes all holdings in fifty-four different science libraries (over 30,000 entries). To increase the effectiveness of this catalogue, an attempt is being made to set up the entries as a database on-line on a central computer. Those departments with terminals on the University computer network may be able to interrogate the catalogue by this means.

Experience in Oxford and elsewhere has shown that library automation is generally costly and difficult to justify on a cost-benefits analysis. The basic problem arises from the large databases which are accessed infrequently. One way of increasing their utilization is by sharing between several user libraries.

If this venture is successful it is hoped to extend the database to include detailed records of individual holdings, including lacunae. The addition of subscription data later on could lead to the development of an on-line automated serials handling system. Interest generated by these activities has led to the setting up of an inter-library working party to explore the feasibility of establishing a union list of scientific texts to include monographs and reports.

† The scientific department of the Bodleian Library.

CONTRIBUTIONS TO THE THEORY OF INTEGRATION
OF SPECIAL LIBRARIES

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Summary

Since 1971 the Central Library of Technical University for Heavy Industry /Miskolc/ has launched a large scale activity to achieve co-operation and integration on the following fields: the adaptation of the METADEX /USA/ computerized metallurgical information system in Hungary; the acquisition of the special literature in co-operation with the four large chemical works of the region; the establishment of a regional translation office.

The work is very fruitful on all the three mentioned field and our experience that have accumulated in the course of our work are suitable to draw theoretical conclusions that refer to the general rules of co-operation.

A co-operation can be lasting only if it is based on the identity of interests. The process can preserve its vitality only if the partners are connected by the willingness to solve not one but many common problems together. Within the co-operation the partners are equal, i.e. the hegemony is excluded but it is necessary that one of the members, the best is if the members can change each other from time to time, should be in charge of the organization of the community's actions. The representatives of the partners must be authorized to bring decisions in order to preserve the vitality and flexibility of the co-operation. Each member must provide solid services on the fields he has undertaken. In the course of the co-operation the personal factors and the human sensibility must be always kept in mind. The integration encourages to quality work because the circle of the tasks is narrower and the voluntary undertaking of tasks stimulates to better performance. The integration may uncover the reserves that can be exploited by discontinuing the parallel work at the single members. The co-operation also can be the source of providing useful methodological aid. The sponsoring institution of the library backs the co-operation only if it directly feels and experience the advantages it receives from the library's extended activity.

INTERACTION OF ONLINE USERS

C. van de Wetheringh

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Abstracts

This paper describes the foundation and development of the Netherlands Association of Online Systems. This is now a recognized, independent organization, with over 150 members. It promotes cooperation in such fields as education and training, cost evaluation, database and systems evaluation, design of search strategies and the availability of business information. Examples of the work of the Association are given, together with plans for future developments such as in the development of internal databases, and teletext systems. The need for international cooperation in the on-line world is discussed. Effective communication channels between users, both nationally and internationally, will be necessary in order to fully utilize the information handling possibilities created by the "computer revolution".

CO-OPERATION AMONG ACADEMIC LIBRARIES IN NEW ZEALAND

P. Durey

Librarian, University of Auckland, New Zealand

Abstract

This paper describes cooperation among academic libraries in New Zealand with regard to acquisitions, and interlibrary lending. The need for cooperation in automation is discussed. The value of meetings of librarians of various grades and interests to discuss matters of common concern is discussed.

THE DEVELOPMENT OF DOCLINE - AN INTERLIBRARY LENDING LINK BETWEEN THE BLLD AND CHALMERS UNIVERSITY LIBRARY

Sven Westberg, Librarian

Nancy Fjällbrant, Deputy Librarian

The Library, Chalmers University of Technology, Gothenburg, Sweden

Abstract

This paper describes an attempt to improve interlibrary lending services at Chalmers University of Technology Library, Gothenburg, Sweden, with respect to satisfaction rate, speed and decreased costs, by the establishment of a computer-based link - DOCLINE - for the transmission of a interlibrary requests to the BLLD. An account is given of the Swedish interlibrary lending network, and the reasons for trying to improve the availability, direct or indirect, for high frequency loan materials at Chalmers Library. The development of the DOCLINE link between Chalmers Library and the BLLD is described and a short account of the programmes used and the operation of the system is given. This is followed by a discussion on the improvement of the interlibrary lending service at Chalmers University. The need for detailed evaluation is pointed out.

THE ROLE OF THE SAIDC SYSTEM IN ESTABLISHING THE AUTOMATED LIBRARY INFORMATION NETWORK IN SLOVENIA (YUGOSLAVIA)

Mara Slajpah

Professor, Central Technical Library, University in Ljubljana, Yugoslavia

Abstract

In Yugoslavia, there exists a plan to establish a co-operative automated library information documentation system. The development of this plan and the agreement about the processing of scientific and technical information will be described. Special regard will be given to the SAIDC system which was the first used for documentation in Yugoslavia.

LIBRARY COOPERATION IN INDIA: PRESENT STATUS AND FUTURE NEEDS

Jeyarani Durairaj

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Abstract

The paper describes the present status of Library Cooperation in India and the plans of the government of India through the NISSAT Programme.

On the basis of existing library services in the national and institutional libraries, and in consideration of future developments in technical education and research, an assessment is made of the need for various types of library cooperation in order to adequately meet future requirements.

Drawing from the situation in advanced countries a plan is provided for establishing active library cooperation at both national and state levels.

THE INTERNATIONAL TRANSLATIONS CENTRE: AN EXAMPLE OF CO-
OPERATION TO REMOVE BARRIERS TO COMMUNICATION
- THE LANGUAGE BARRIER -

D. van Bergeijk, Director
M. Risseeuw

International Translations Centre, Delft, The Netherlands.

Abstract

International cooperation is essential to break the language barrier which still impedes the free flow of scientific information.

The International Translations Centre, a network of international co-operation, composed of libraries and national translations centres from various countries, contributes extensively to diminish the influence of the language barrier.

A database on translations, the WORLD TRANSINDEX, is set up jointly with the Commission of the European Communities and the Centre National de la Recherche Scientifique, Paris.

A comprehensive bibliography on translations, JOURNALS IN TRANSLATION, is jointly published with the British Library Lending Division, of which a COM-fiche version is published by Instituto de Informacion y Documentacion en Ciencia y Tecnologia, Madrid.

The Centre contributed in the preparation of the international standard ISO-2384-1977 - Presentation of translations.

The Centre proposed to UNIBID an amendment to the UNISIST Reference Manual for machine-readable bibliographic descriptions concerning descriptions of translations.

International co-operation may lead to language problems. In realizing this, the Commission of the European Communities has set up a Committee of Experts for the Transfer of Information between European Languages (CETIL), next to the CIDST subgroup multilingual.

ABSTRACT

COOPERATION OF HUNGARIAN TECHNOLOGICAL UNIVERSITY LIBRARIES ON THE FIELD OF SCIENTIFIC INFORMATION SERVICES AND THE SPECIAL FEATURES OF THE VESZPRÉM UNIVERSITY LIBRARY'S ACTIVITY

Dr. Z. Kováts

Director, Central Library of the Veszprém University
of Chemical Engineering, Veszprém, Hungary

Cooperation between Hungarian TU libraries has been established long ago. The services rendered, however, do not include all kinds of library activities, nor compensate each other. In order to stabilize long range cooperations, uncompensated services must be paid on a price, which assures not only reimbursement of all direct costs, but allows some premium to the librarians concerned. The Veszprém University Library supplies information services also to an extended group of various users, not only other Hungarian TU libraries. The service oriented organization, which does not include the conventional documentation and publishing activities is a special feature of the Veszprém University Library in Hungary.

CO-OPERATION IN THE PROVISION OF SERVICES TO READERS IN CONURBATIONS

A.C. Bubb

Librarian, University of Salford, U.K.

Abstract

Co-operation should lead to greater reader satisfaction.

Large urban areas may have more than one university and other institutions of higher education, each possessing its own library, along with public and special libraries, all lying within a fairly small geographical area.

To students and research workers ease of access to a variety of libraries in the area seems attractive and the relative usefulness of their services important.

Undergraduates should naturally expect to have most of their needs satisfied in their own institution, but graduate students and staff may often expect to use other libraries in the neighbourhood.

It is the aim of some libraries in conurbations to recognise, evaluate and meet these expectations. Examples are given of the following main areas of activity in Great Britain:

1. Joint records of stock as special projects or fully co-operative cataloguing.
2. Joint announcements of services available from a group of libraries.
3. Co-operative stock building designed to achieve better coverage for the whole area.
4. Staff co-operation and interchange.
5. Local inter-lending services.
6. Unification of administrative procedures.

The problems met in general are considered under the following main headings:

1. Different aims of institutions of higher education and hence of libraries.
2. Different views of degree of public access among libraries of all types.
3. Financial inability or unwillingness to join the co-operative arrangements.
4. Geographical difficulties (e.g. public transport or parking problems).
5. Impact of regional and national schemes of co-operation.
6. Uncertainty of academic aims of institutions.

Practical problems encountered in the Greater Manchester area are considered, the results so far achieved evaluated and comparisons drawn from other areas of urban co-operation in Great Britain. The justification for local efforts at a time of increasing mechanisation and perhaps of more efficient national schemes is discussed.

Conclusions involve weighing the advantage to readers of local schemes against cost in financial and "political" terms, the gains and losses to users of less independence for the members of co-operative undertakings and an assessment of how far libraries near in geographical terms are really so in terms of the movement and interests of various types of user.

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COOPERATION BETWEEN THE ESTABLISHMENTS OF HIGHER EDUCATION IN LAUSANNE

T.J. Tanzer

Director of Libraries, Ecole polytechnique fédérale de Lausanne,
Lausanne, Switzerland

Abstract

The city of Lausanne houses two Establishments of Higher Education, the University of Lausanne and the Swiss Federal Institute of Technology of Lausanne.

While the university has a broader spectrum of subjects taught, certain, notably mathematics and the exact sciences, are taught at both. The boards of governors have mandated a study of the possibility of cooperation by the two libraries. The paper presents the exact situation in Lausanne, the implications for immediate close cooperation under an orthodox system and indicates where closer cooperation could be achieved with an automated system.

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THE COMPILATION OF A PERSONAL DOCUMENTATION SYSTEM

R. Kriek

Subject librarian, Twente University of Technology, Enschede, The Netherlands

Abstract

This paper describes a course of instruction in the compilation of a personal documentation system, at Twente University of Technology, the Netherlands. Students are introduced to indexing with key words, thesaurus construction, bibliographical description, and the use of inverted files. They are taught the use of the 'uniterm card system'. The advantages of automation of a personal documentaion system are discussed.

ABSTRACT

To cooperate or not to cooperate

M. W. HILL
British Library
Science Reference Library

Cooperation on practical projects, as distinct from that on intellectual ones, poses a number of managerial and administrative problems which are not encountered in in-house projects or work contracted out to agencies. If, therefore, the project is to be successful, it is necessary to identify all these additional factors before starting and to ensure that the requirements of each will be satisfactorily met. The longer the project is likely to last, the more important it is to be sure that it is designed to cope with factors such as defection of one of the partners or the need to adapt to new technology or circumstances. Unless the balance of the various factors is substantially in favour of a successful outcome, it is wiser to seek a solution other than by a cooperative project.

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8th IATUL CONFERENCE

28th May - 1st June 1979, Enschede, The Netherlands

LIBRARY COOPERATION: TRENDS, POSSIBILITIES AND CONDITIONS

Programme

Monday 28th May.

- Theme: "FRAMEWORK FOR COOPERATION" - 1st session.
(to be held in the auditorium of the Schermerhorn Hall)
- 15.30 hrs. The opening of the conference by IATUL's President G.A. Hamel.
- 16.00 hrs. Introductory Paper: "Is cooperation a good thing?"
Paper 1. Maurice B. Line
- 17.30 hrs. Reception on behalf of the Twente University to be held in the University Library. A welcoming address will be delivered by the President of the Executive Committee, Mr A. Hooites Meursing. A presentation of Twente Technological University Library by G.A. Hamel. Transport by coach will leave the Schermerhorn Hall at 17.00 hrs. prompt. Transport to Hotel "t Kruisselt" will depart from the University at approx. 20.00 hrs.

Tuesday 29th May.

- Theme: "FRAMEWORK FOR COOPERATION" - 2nd session.
(to be held at hotel 't Kruisselt)
- 09.00 hrs. "The organisation of co-operation".
Paper 2. Prof. M.R. van Gils
- Paper 3. "Co-operation in library and information service - the role of intergovernmental organisations".
Mrs. Elin Törnudd
- Communication 1. "Cooperation as a solution to the problems of European documentation".
Mike Hopkins
(Chairman: Dr. Sven Westberg)
- 12.30 hrs. Lunch.
- 13.45 hrs. "Cooperative collection development".
Paper 4. James E. Skipper
- Communication 2. "Cooperation amongst the science libraries at Oxford university".
Dr. Dennis Shaw
- Communication 3. "Contributions to the theory of integration of special libraries".
Dr. Jozef Zsidai

Communication 4. "Interaction of online users"
C. van de Weteringh.

(Chairman: Michael W. Hill)

Communication 5. "Cooperation among academic libraries in New Zealand"
Peter Durey

Dinner

19.30 hrs. "The experimental scientist and his literature searches".
Guest paper D.A.A. Mossel

Wednesday 30th May.

Theme: "DEVELOPMENT OF AN E.D.P. SYSTEM FOR LIBRARY
AUTOMATION - 1st session to be held in Dortmund.

08.30 hrs. Departure by coach for the excursion to Dortmund University
of Technology Library, B.R.D.

Paper 5. "Dobis at the Bibliocentre".
Mrs. Doreen E. Carpenter

13.00 hrs. Lunch.

14.30 hrs. "New aspects and trends in interlending in the Federal Republic
of Germany".

Paper 6. Dr. Jürgen Heydrich

(Chairman: Dr. Valentin Wehefritz)

Demonstration of DOBIS at the University of Dortmund Library.

Visit to the University of Münster Library.

Thursday 31st May

Theme: "DEVELOPMENT OF AN E.D.P. SYSTEM FOR LIBRARY
AUTOMATION". - 2nd session to be held in Hotel 't Kruisselt

09.00 hrs. "The Swedish Libris system".
Paper 7. Lennart Gärdvall

Paper 8. "The PICA catalogue system".
L. Costers

Communication 6. "The development of DOCLINE - an interlibrary lending link between
the BLLD and Chalmers University Library".
Dr. Sven Westberg and Dr. Nancy Fjällbrant

(Chairman: Prof. Anthony J. Evans)

12.30 hrs. Lunch.

- Theme:** "OTHER FORMS OF COOPERATION SUCH AS COOPERATIVE ACQUISITION, INTERLIBRARY LENDING AND STORAGE".
- 13.45 hrs "The role of the SAIDC system in establishing the automated library information network in Slovenia (Yugoslavia)
- Communication 7. Prof. Mara Slajpah
- Communication 8. "Library cooperation in India: present status and future needs".
Mrs. Jeyarani Durairaj
- Communication 9. "The International Translations Centre: An example of co-operation to remove barriers to communication".
D. van Bergeijk and M. Risseuw
- Communication 10. "Cooperation of Hungarian Technological University Libraries on the field of scientific information services and the special features of the Veszprém University Library's activity".
Dr. Zoltan Kováts
- Communication 11. "Co-operation in the provision of services to readers in conurbations".
A.C. Bubb
- Communication 12. "Cooperation between the establishments of higher education in Lausanne".
T.J. Tanzer
- (Chairman: Charles Wood)
- 19.30 hrs. Conference dinner.

Friday 1st June.

- Theme:** "COOPERATION IN USER EDUCATION AND IN TEACHING LIBRARY COOPERATION TO LIBRARY STUDENTS
- session to be held in the Schermerhorn Hall, Enschede. Transport by coach will leave the hotel at 08.15 hrs.
- 09.00 hrs. "Cooperation in library user education".
Paper 9. Dr. Nancy Fjällbrant
- Communication 13. "The compilation of a personal documentation system".
R. Kriek
- Paper 10. "Teaching library co-operation to library students".
Ben Rugaas
- Communication 14. "To cooperate or not to cooperate".
Michael W. Hill
- (Chairman: G.A. Hamel)
- 12.30 hrs. Lunch at the Schermerhorn Hall.

FAREWELL UNTIL 1981 - THE 9th CONFERENCE.